

BOSE MCKINNEY & EVANS LLP**25267**

PATENT TRADEMARK OFFICE

2700 First Indiana Plaza
135 North Pennsylvania Street
Indianapolis, Indiana 46204**PATENT APPLICATION**

Applicant: Hill
Serial No.: 09/618,744
Filing Date: July 18, 2000
Title: ELECTRONIC CATALOG SYSTEM AND METHOD
Group: 3625 Examiner: Garg, Yogesh C.
Attorney Docket No.: 10252-0013

**Certificate Under 37 C.F.R. 1.8(a)**

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On January 9, 2004

Timothy E. Niednager

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P. O. Box 1450
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Dear Sir:

Transmitted herewith is a response in the above-identified application:

The fee has been calculated as shown below:

TOTAL CLAIMS (37 C.F.R. 1.16(c))	12	52	0	\$18	\$0
INDEPENDENT CLAIMS (37 C.F.R. 1.16(b))	2	6	0	\$86	\$0
If applicant has small entity status under 37 C.F.R. 1.9 and 1.27, then divide total fee by 2, and enter amount here.			SMALL ENTITY TOTAL	yes	\$0
TOTAL FEE FOR ADDITIONAL CLAIMS					\$0

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\$475**TOTAL FEE FOR THIS AMENDMENT**\$475

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The Commissioner is hereby authorized to charge any additional filing fees under 37 C.F.R. 1.16 or processing fees under 37 C.F.R. 1.17 which may be required during the prosecution of this application, or credit of any overpayment, to Bose McKinney & Evans LLP's Deposit Account No. 02-3223. A duplicate copy of this sheet is enclosed.

Attorney of Record
Printed Name: Timothy E. Niednager
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PATENT APPLICATION

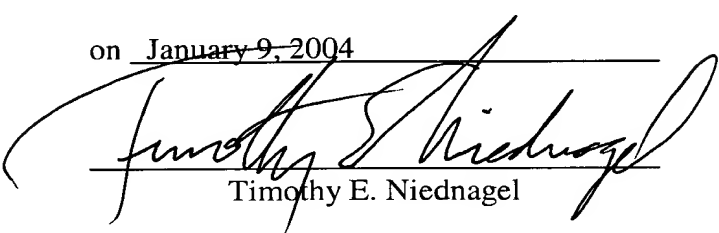
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group: 2165 }
Atty. Docket: 10252-0013 }
Applicants: Hill }
Invention: ELECTRONIC CATALOG }
SYSTEM AND METHOD }
Serial No.: 09/618,744 }
Filed: July 18, 2000 }
Examiner: Garg, Yogesh C. }

Certificate Under 37 C.F.R. § 1.8(a)

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on January 9, 2004


Timothy E. Niednagel

SUBMISSION OF INFORMATION FROM RELATED LITIGATION

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Dear Sir:

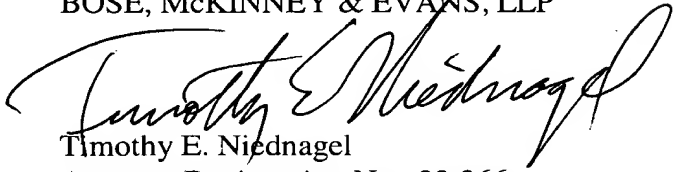
U.S. Patent No. 5,528,490 is the subject of ongoing litigation in the matter of Charles E. Hill & Associates, Inc. v. CompuServe, Inc., Cause No. IP 97-0434-C M/S. U.S. Patent Nos. 5,528,490; 5,761,649; and 6,029,142 are the subject of ongoing litigation in the matter of Charles E. Hill & Associates, Inc. v. Amazon.com, Inc. et al., Case No. 1:03-CV-0263 LJM/VSS, in the Southern District of Indiana. The instant application Ser. No. 09/618,744, filed July 18, 2000, is a continuation of application Ser. No. 09/080,603, filed May 18, 1998, now U.S. Patent No. 6,131,088, which is a continuation of application Ser. No. 08/747,275, filed November 12, 1996, now U.S. Patent No. 5,754,864, which is a divisional of application Ser. No. 08/460,913, filed June 5, 1995, now U.S. Patent No. 5,761,649, which is a continuation of U.S. Application Ser. No. 07/866,867, filed April 10, 1992, now U.S. Patent No. 5,528,490.

Pursuant to M.P.E.P. § 2001.06(c), Applicant submits the following Information from Related Litigation:

- 1) Order on Claim Construction dated August 29, 2003; and
- 2) Order on Defendant's Motion for Summary Judgment on Non-Infringement dated September 26, 2003.

Applicant is not admitting to the Court's disposition in the above-referenced opinions.

Respectfully Submitted,
BOSE, McKINNEY & EVANS, LLP



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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF INDIANA
INDIANAPOLIS DIVISION

CHARLES E. HILL & ASSOCIATES, INC.,)
Plaintiff,)

vs.)

COMPUSERVE INCORPORATED and)
COMPUSERVE INTERACTIVE SERVICES,)
INC.,)
Defendant.)

IP 97-0434-C-M/S

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ORDER ON CLAIM CONSTRUCTION

This cause is on remand from the Federal Circuit Court of Appeals. In its order the Federal Circuit instructed this Court to construe the system claims and determine in light of that construction whether it should reconsider its grant of summary judgment to CompuServe on those claims. *Charles E. Hill & Assocs., Inc. v. CompuServe, Inc.*, Nos. 00-1562, 00-1588, 2002 WL 535806, at *7 (Fed. Cir.) ("*Hill III*"), *reh'g denied*, No. 00-1562, 2202 WL 857780 (Fed. Cir. 2002). This order addresses the first directive: to construe the system claims of the plaintiff's, Charles E. Hill & Associates, Inc. ("*Hill*"), patent, U.S. Patent No. 5,528,490 (the "'490 patent").

The parties have submitted supplemental briefs on the meaning of the terms in the disputed system claims of the '490 patent, Claims 30, 31, 32, 35, 36, 37, 38, and 39. The following is the Court's construction for these claims.

I. BACKGROUND

On January 6 and 7, 1999, this Court held a hearing pursuant to the guidelines established by the Supreme Court in *Markman v. Westview Institute, Inc.*, 517 U.S. 370, 388-90 (1996) ("*Markman*

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IP”), and the Federal Circuit in *Markman v. Westview Institute, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (“*Markman I*”), to receive and consider the parties arguments with respect to dispute claim language. On April 9, 1999, the Court issued an order on claim construction. *Charles E. Hill & Assocs., Inc. v. CompuServe, Inc.*, 65 F. Supp. 2d 924 (S.D. Ind. 1999) (“*Hill I*”). In *Hill I* this Court construed the meaning of the terms “storing,” “maintaining,” “updating,” “integrating,” “constant data,” “variable data,” and “revision status.” *Id.* at 933-49.

On August 24, 2000, this Court issued an order on the defendants’ summary judgment motions. *Charles E. Hill & Assocs., Inc. v. CompuServe, Inc.*, No. IP97-0434-C-M/S, 2000 WL 1473875 (S.D. Ind. Aug. 24, 2000) (“*Hill II*”). In *Hill II*, the Court denied CompuServe’s motion for summary judgment on its counterclaim for declaratory judgment that the ‘490 patent was invalid. *Id.* at *43. But, the Court granted CompuServe’s motion for summary judgment on Hill’s claim for indirect infringement because the allegedly infringing systems lacked the “storing” element common to all the asserted claims, and because the allegedly infringing systems lacked the “constant data” and “variable data” elements. *Id.* at *23, *28, *31-33, *34, * 45.

Both parties appealed the rulings adverse to it. *See Hill III*, 2002 WL 535806, at *1. In *Hill III*, the Federal Circuit disagreed with this Court’s interpretation for the term “storing” in the ‘490 patent, holding that the ordinary meaning of the term was the correct interpretation. *Id.* at *3-4. However, the Federal Circuit agreed with this Court’s interpretation for the terms “constant data” and “variable data,” holding that Hill had failed to evidence “that CompuServe practiced a method that included steps relating to the claimed use of constant and variable data.” *Id.* at *6. But, this ruling was limited to the method claims of the ‘490 patent. *Id.* at *7. With respect to the system claims, the Federal Circuit held that further construction of the system claims was necessary in light of its

different interpretation for the term “storing.” *Id.* Specifically, the Federal Circuit stated:

In light of our disagreement with the district court as to the proper definition of the term “storing,” the issue of the proper construction of the system claims becomes more important. The proper construction of those claims is not obvious, both because of the ambiguity inherent in the term “computer . . . for storing” that is found in all of the system claims, and because of the need to determine the scope of the several means-plus-function limitations in each of those claims, something that can be done only by consulting the specification, as dictated by 35 U.S.C. § 112, para. 6. Because the district court has not yet construed the critical language of the system claims, we are unable to review the court’s construction of those claims. We therefore remand for the district court to construe the system claims

Id. (internal citations omitted).

Therefore, this Order focuses on construction of the system claims in light of the Federal Circuit’s interpretation of the term “storing” and this Court’s interpretation of the remaining claim language. There are two independent system claims in the ‘490 patent. They read:

30. An electronic catalog system comprising:

a main computer including a main memory for storing variable data, constant data and a main revision status related to at least one product, the main revision status indicating the revision level of the constant data stored in the main memory;

a remote computer including a remote memory for storing constant data and a remote revision status related to the at least [sic] one product, the constant data being a subset of information data related to the at least [sic] one product, the remote revision status indicating the revision level of the constant data stored in the remote memory;

means for transmitting the remote revision status from the remote computer to the main computer;

means for comparing the remote revision status with the main revision status;

means for selecting portions of the constant data stored in the main memory that are different from the constant data stored in the remote computer;

means for transmitting updated portions of the constant data stored in the main memory from the main computer to the remote computer;

means for replacing portions of the constant data stored in the remote memory with the updated portions of constant data received from the main computer;

means for transmitting variable data related to a selected product stored in the main memory from the main computer to the remote computer; and

means for integrating constant data related to the selected product stored in the remote memory with the variable data related to the selected product received from the main computer to generate said information data related to the selected product including both constant data and variable data.

* * *

35. An electronic catalog system comprising:

a main computer including a main memory for storing variable data and constant data related to a plurality of products;

a remote computer including a remote memory for storing constant data related to a plurality of products, the constant data being a subset of product information data related to the plurality of products;

means for transmitting a request for variable data related to a selected product from the remote computer to the main computer;

means for comparing constant data in the remote memory with constant data in the main memory;

means for transmitting updated portions of the constant data stored in the main memory from the main computer to the remote computer;

means for replacing portions of the constant data stored in the remote memory with the updated portions of constant data received from the main computer;

means for transmitting variable data related to the selected product stored in the main memory from the main computer to the remote computer; and

means for integrating constant data related to the selected product stored in the remote memory with the variable data related to the selected product received from the main computer to generate the product information data related to the selected product including both constant data and variable data.

'490 Patent, col. 25, l. 15 to *id.* col. 26, l. 53.

II. STANDARDS

When construing the '490 patent's system claims, the Court must determine the meaning of the language used before it can ascertain the scope of those claims. *See Markman I*, 52 F.3d at 979. In doing so, the Court's interpretive focus is not the subjective intent of the parties employing a certain term, but the objective test of what one of ordinary skill in the art at the time of the invention would have understood the term to mean. *See id.* at 986. When the Court undertakes its duty to construe the claims, it first must look to the intrinsic evidence: the asserted and unasserted claims, the specification, and the prosecution history. *See Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1366 (Fed. Cir. 2001); *Watts v. XL Sys. Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000); *Desper Prods. Inc. v. QSound Labs, Inc.*, 157 F.3d 1325, 1333 (Fed. Cir. 1998) (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1581 (Fed. Cir. 1996)); *Markman I*, 52 F.3d at 979. Most of the time, such evidence will provide sufficient information for construing the claims. *See Vitronics*, 90 F.3d at 1583.

The patent claims should “particularly point out and distinctly clai[m] the subject matter which the applicant regards as his invention.” *Markman II*, 517 U.S. at 373 (citing 35 U.S.C. § 112). During claim construction, the appropriate starting point for the court's inquiry is always the words of both the asserted and unasserted claims. *See Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 977 (Fed. Cir. 1999); *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999); *Comark Comms., Inc. v. Harris Corp.*, 156 F.3d 1182, 1186 (Fed. Cir. 1998); *Vitronics*, 90 F.3d at 1582; *see also Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). It is the claims, not the written description, that define the scope of the patent and accordingly, the patentee's rights. *See Laitram Corp. v. NEC Corp.*, 163 F.3d 1342, 1347 (Fed. Cir. 1998); *Markman I*, 52 F.3d at 970-71. As the Federal Circuit has noted, “[c]ommon words, unless the context suggest

otherwise, should be interpreted according to their ordinary meaning.” *Desper Prods.*, 157 F.3d at 1336 (citing *York Prods., Inc. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572 (Fed. Cir. 1996)). See also *Ecolab*, 264 F.3d at 1366; *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 989 (Fed. Cir. 1999); *Renishaw*, 158 F.3d at 1249. Further, when there are several common meanings for a term, “the patent disclosure serves to point away from the improper meanings and toward the proper meaning.” *Renishaw*, 158 F.3d at 1250. Accord *Desper Prods.*, 157 F.3d at 1336 (stating that the context of the claims can be found in the specification and drawings).

A claim term will not be given a common dictionary meaning, however, if such a reading would be nonsensical in light of the patent disclosure, or specification. See *Renishaw*, 158 F.3d at 1250. Accordingly, the correct claim construction is also the one that “stays true to the claim language and most naturally aligns with the patent’s description of the invention.” *Id.* That description, or specification, serves an important purpose. In it, the patentee must provide a written description of the invention that would allow a person of ordinary skill in the art to make and use the invention. See *Markman I*, 52 F.3d at 979. The applicable statute requires that “[t]he specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same . . .” 35 U.S.C. § 112, ¶ 1. See also *Johnson Worldwide Assocs.*, 175 F.3d at 993. Therefore, to discover the correct meaning of a disputed claim term, the court must refer to the specification’s description of the invention.

In addition, a patentee may be his or her own lexicographer and use terms in a manner different from their ordinary meaning. See *Johnson Worldwide Assocs.*, 175 F.3d at 990; *Vitronics*, 90 F.3d at 1582. If the patentee chooses to do that, he or she must clearly state the special definition

in the specification or file history of the patent. *See id.* The specification then serves as a dictionary when it defines terms, either expressly or by implication, that are used in the claims. *See id.* Therefore, it is also important to review the specification to discern whether the patentee has used a term in a way that is inconsistent with its ordinary meaning. *See id.* However, the specification should be used to clarify unclear claim terms, not to “trump the clear meaning of a claim term.” *Comark*, 156 F.3d at 1187 (citing *E.I. du Pont de Nemours & Co. v. Phillips Petroleum*, 849 F.2d 1430, 1433 (Fed. Cir. 1988)).

Claims must be read in light of the specification. *See Markman I*, 52 F.3d at 979. However, generally, limitations from the specification may not be read into the claims.¹ *See Comark*, 156 F.3d at 1186; *see also Laitram*, 163 F.3d at 1347. In particular, the court should not limit the invention to the specific examples or preferred embodiment found in the specification. *See Texas Instruments, Inc. v. U.S. Int’l Trade Comm’n*, 805 F.2d 1558, 1563 (Fed. Cir. 1986); *see also Comark*, 156 F.3d at 1186. Therefore, the “repetition in the written description of a preferred aspect of a claim invention does not limit the scope of an invention that is described in the claims in different and broader terms.” *Laitram*, 163 F.3d at 1348. *See also Electro Med. Sys. v. Cooper Life Scis., Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

Interpreting the meaning of a claim term “is not to be confused with adding an extraneous limitation appearing in the specification, which is improper.” *Laitram*, 163 F.3d at 1348 (quoting *Intervet Am., Inc. v. Kee-Vet Lab., Inc.*, 887 F.2d 1050, 1053 (Fed. Cir. 1989)). An extraneous limitation is a limitation added “wholly apart from any need to interpret what the patentee meant by

¹As will be discussed further, an exception to this rule applies when the claim is written in a means-plus-function format under 35 U.S.C. § 112, ¶ 6.

particular words and phrases in the claim.” *Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d 948, 950 (Fed. Cir. 1993). *See also Renishaw*, 158 F.3d at 1249. Although there is a fine line between reading a claim in light of the specification and reading a limitation from the specification into the claim, the Court must look cautiously to the specification for assistance in defining unclear terms. *See Watts*, 232 F.3d at 882; *Comark*, 156 F.3d at 1186-87.

The third source of intrinsic evidence is the patent’s prosecution history. *See Desper Prods.*, 156 F.3d at 1336-37; *Vitronics*, 90 F.3d at 1582. “Prosecution history is an important source of intrinsic evidence in interpreting claims because it is a contemporaneous exchange between the applicant and the examiner.” *Desper Prods.*, 157 F.3d at 1336-37. In a patent’s prosecution history the Court will find a complete record of the proceedings before the PTO leading to issuance of the patent. *See Vitronics*, 90 F.3d at 1582. The prosecution history contains both express representations made by the patentee concerning the scope of the patent, as well as interpretations of claim terms that were disclaimed during the prosecution. *See id.* at 1582-83; *see also Ecolab*, 264 F.3d at 1368; *Elkay Mfg.*, 192 F.3d at 978; *Southwall Tech Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir.), *cert. denied*, 516 U.S. 987 (1995). Although the prosecution history is useful for understanding claim language, it “cannot enlarge, diminish, or vary the limitations in the claims.” *Markman I*, 52 F.3d at 979 (quotations omitted).

In some cases, it may be necessary for the court to consult extrinsic evidence to aid it in construing the claim language. *See Pitney Bowes*, 182 F.3d at 1308; *Vitronics*, 90 F.3d at 1584. Extrinsic evidence is any evidence outside of the patent and prosecution history, “including expert and inventor testimony, dictionaries, and learned treatises.” *Markman I*, 52 F.3d at 980. *See also Pitney Bowes*, 182 F.3d at 1308. It may be used to assist the court’s understanding of the patent, or

the field of technology. *See Markman I*, 52 F.3d at 980-81. However, “courts [should] not *rely* on extrinsic evidence in claim construction to contradict the meaning of claims discernible from thoughtful examination of the claims, the written description, and the prosecution history—the intrinsic evidence.” *Pitney Bowes*, 182 F.3d at 1308 (emphasis in original) (citing *Vitronics*, 90 F.3d at 1583). Judges are not usually “conversant in the particular technical art involved,” or capable of reading the patent specification and claims as one skilled in the art might. *Markman I*, 52 F.3d at 986. *See also Pitney Bowes*, 182 F.3d at 1308-09. Therefore, “consultation of extrinsic evidence is particularly appropriate to ensure that [the Court’s] understanding of the technical aspects of the patent is not entirely at variance with the understanding of one skilled in the art.” *Pitney Bowes*, 182 F.3d at 1309. When the Court relies on extrinsic evidence to assist with claim construction, and the claim is susceptible to both a broader and a narrower meaning, the narrower meaning should be chosen if it is supported by the intrinsic evidence. *See Digital Biometrics v. Identix*, 149 F.3d 1335, 1344 (Fed. Cir. 1998). It is entirely proper for the court to accept and admit extrinsic evidence, such as an expert’s testimony, to educate itself, but then base its construction solely on the intrinsic evidence. *See Mantech Envtl. Corp. v. Hudson Envtl. Servs., Inc.*, 152 F.3d 1368, 1373 (Fed. Cir. 1998).

Further, the Federal Circuit has taken special note of the use by courts of a specific type of extrinsic evidence: dictionaries. In its *Vitronics* opinion, the court explained that although technical treatises and dictionaries are extrinsic evidence, judges are free to consult these resources at any time in order to get a better understanding of the underlying technologies. 90 F.3d at 1584 n.6. The *Vitronics* court stated that judges may rely on dictionaries when construing claim terms as long as the dictionary definition does not contradict the definition found in, or ascertained by, a reading of the

patent. *Id.*

Claim elements of the '490 patent that are written in a means-plus-function format under 35 U.S.C. § 112, ¶ 6 require special rules of construction. When a patentee uses such an element, he or she is subject to the following statutory provision:

[a]n element in a claim for a combination may be expressed as a means . . . for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specifications and equivalents thereof.

35 U.S.C. § 112, ¶ 6. *See also Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1211 (Fed. Cir. 1998).

For an element in a means-plus-function format, the “means” term “is essentially a generic reference for the corresponding structure disclosed in the specification.” *Chiuminatta Concrete Concepts v. Cardinal Indus.*, 145 F.3d 1303, 1308 (Fed. Cir. 1998). *See also Mas-Hamilton Group*, 156 F.3d at 1211 (quoting *Chiuminatta Concrete Concepts*, 145 F.3d at 1308). By using this format, a patentee is allowed to claim a function without expressing all of the possible means of accomplishing that function. *See O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1583 (Fed. Cir. 1997). “The price that must be paid for use of that convenience is limitation of the claim to the means [or acts] specified in the written description and equivalents thereof.” *Id.*

Thus, a claim expressed in means-plus-function language constitutes an exception to the rule that prohibits reading limitations from the specification into the claims. *See Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042 (Fed. Cir. 1993). For example, when dealing with a means-plus-function claim, specific alternative structures mentioned in the specifications, and equivalents thereto, delineate the scope of the patent. *See Mas-Hamilton Group*, 156 F.3d at 1211; *Serrano v.*

Telular Corp., 111 F.3d 1578, 1583 (Fed. Cir. 1997). The alternative structures must be specifically identified, not just mentioned as possibilities, in order to be included in the patent's scope. *See Fonar Corp. v. Gen. Elec. Co.*, 107 F.3d 1543, 1551 (Fed. Cir.), *cert. denied*, 522 U.S. 908 (1997).

With these standards, the Court finds the construction of the system claims as follows.

III. DISCUSSION

A. CLAIM 30

1. "Main Computer" & "Remote Computer"

As was the case when the parties first briefed the construction of the '490 patent claims, many of the terms in the system claims are largely undisputed. However, the parties disagree over the construction for the first two elements of Claim 30. The first claim element reads: "a main computer including a main memory for storing variable data, constant data and a main revision status related to at least one product, the main revision status indicating the revision level of the constant data stored in the main memory" '490 Patent, col. 25, ll. 16-20. The Court will refer to the first element of Claim 30 as the "main computer" element. The second claim element reads:

a remote computer including a remote memory for storing constant data and a remote revision status related to the at least one product, the constant data being a subset of information data related to the at least one product, the remote revision status indicating the revision level of the constant data stored in the remote computer

Id. col. 25, ll. 21-26. The Court will refer to the second element of Claim 30 as the "remote computer" element.

Hill asserts that both elements mean, in their entirety: "A computer that has a memory for storing data as required by subsequent limitations within the claim." Pl.'s Exh. H, Chart, Proposed

Claim Construction of Pl. Charles E. Hill & Assocs., Inc., at 1 (“Pl.’s Claim Constr. Chart”). In contrast, CompuServe asserts that the “main computer” element means, in its entirety: “A computer that has a memory in which variable data, constant data, and a main revision status indicating the revision level of the constant data is stored as required by subsequent limitations within the claim.” Defs.’ Addendum A, Proposed Claim Construction of Plaintiff Charles E. Hill & Assocs., Inc. with Defs.’ Proposed Modifications, at 1 (“Defs.’ Claim Constr. Chart”). Similarly, CompuServe asserts that the “remote computer” element means, in its entirety: “A computer that has a memory in which constant data and a remote revision status indicating the revision level of the constant data is stored as required by subsequent limitations within the claim.” *Id.*

Therefore, the major difference between the two proposed constructions is whether or not the main and remote computer elements require that the computer memory actually store the data referred to in the claim. The Court finds that the language of Claim 30 requires that specific types of data be stored on the main and remote computers. Therefore, the “main computer” phrase means: “a computer that has a memory in which variable data, constant data, and a main revision status indicating the revision level of the constant data is stored;” and the “remote computer” phrase means: “a computer that has a memory in which constant data and a remote revision status indicating the revision level of the constant data is stored.”

Starting with the plain language of the claims, the Court notes that the elements themselves use permissive rather than compulsory language to describe the memory required of the two computers. Claim 30 states, in relevant part: “a main computer including a main memory for storing . . .,” ‘490 Patent, col. 25, *l.* 16, “a remote computer including a remote memory for storing . . .” *Id.* col. 25, *l.* 21. The use of the word “for” in these phrases is permissive. In other words, the word

“for” implies that the memory needs to “be capable of” the function described, rather than requiring that the memory actually perform the function described. *See, e.g., Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1366 (Fed. Cir. 2001) (finding that the functional phrase “for ware and hard surface washing” required only that the “substantially uniform” detergent referred to “contain components capable of ‘ware and hard surface washing’”)); *Intel Corp. v. Broadcom Corp.*, 172 F. Supp. 2d 516, 546 (D. Del. 2001) (finding that “the functional phrase ‘for coupling’ . . . indicates only that the I/O port must be capable of being connected to an off-chip memory means and not that it is actually connected to such memory means”).

But, the main and remote computer phrases in Claim 30 of the ‘490 patent do not exist in a vacuum. *Accord Laitram Corp. v. Cambridge Wire Cloth Co.* 863 F.2d 855, 858 (Fed. Cir. 1988) (finding that a claim term, “slightly greater,” was not without definitional parameters found within the remainder of the claim). The remainder of the claim requires that certain types of data or information be stored in a certain computer. For example, the third element of Claim 30 requires that the system have a “means for transmitting the remote revision status from the remote computer to the main computer.” ‘490 Patent, col. 25, ll. 28-29. This element assumes that the remote revision status is found at the remote computer. It specifically states that the structure referred to is used to transmit the revision status “from” the remote computer to the main computer. This can only happen if the remote computer stores the remote revision status. Five other claim elements, elements five through nine of Claim 30, specifically state that the data or status it references is found in a particular computer’s memory. *See, e.g., id.* col. 25, ll. 32 - 34 (“means for selecting portions of the constant data stored in the main memory that are different from the constant data stored in the remote memory”); *id.* (“means for transmitting updated portions of the constant data stored in the main

memory from the main computer to the remote computer”); *id.* col. 25, *ll.* 38-40 (“means for replacing portions of the constant data stored in the remote memory with the updated portions of constant data received from the main computer”), *id.* col. 25, *ll.* 41-43 (“means for transmitting variable data related to a selected product stored in the main memory from the main computer to the remote computer”); *id.* col. 25, *ll.* 45-50 (“means for integrating constant data related to the selected product stored in the remote memory with the variable data related to the selected product received from the main computer”). Therefore, the language of Claim 30, in its entirety, requires that the types of data identified be stored in the memory of either the main or remote computer, or both.

A construction for the first two elements of Claim 30 that requires that the main and remote computers store certain types of data also comports with the teachings in the specification. The Abstract delineates that the electronic catalog defined by the patent, whether system or method, “perform[] the steps of storing and maintaining variable data and constant data . . . in a memory of a main computer and storing constant data . . . in a memory of a remote computer.” *Id.* Abstract, at 1. In other words, certain data is stored on particular computers. In addition, the abstract teaches that “[a] constant data revision status in the memory of the main computer is then compared with a constant data revision status in the memory of the remote computer” *Id.* Again, certain information is stored on certain computers.

The specification also teaches that “[c]atalog data is stored on both the vendor’s computer and the customer’s computer.” *Id.* col. 1, *ll.* 51-52. The specification here teaches that the vendor’s computer contains variable data and the customer’s computer contains all constant data. *Id.* col. 1, *ll.* 52-58. Similarly, in the Detailed Description of the Drawings section of the specification, the ‘490 patent teaches:

“[H]ard disk drive 30 of vendor’s computer 12 is used to store variable data [and] constant data” *Id.* col. 8, *ll.* 48-49.

“[C]onstant data . . . [is] stored on hard disk drive 36 of customer’s computer 18.” *Id.* col. 8, *ll.* 65-67.

“Variable data is stored in vendor’s computer 12.” *Id.* col. 9, *ll.* 40-41.

“Constant data is stored in customer’s computer 18.” *Id.* col. 9, *ll.* 45-46.

And, the specification, like Claim 30 itself, teaches that certain data is stored in certain computers because such data or its status is either transmitted to the other computer or is compared by the computer that stores the data or status. *See, e.g., id.* col. 18, *ll.* 31-34 (the vendor’s computer compares the constant data revision status received from customer’s computer with the constant data revision status on the vendor’s computer); *id.* col. 19, *ll.* 49-51 (customer’s computer replaces stored constant data files with updated files received from vendor’s computer); *id.* col. 20, *ll.* 5-11 (vendor’s computer builds a data file of variable data to transmit to customer’s computer based on customer’s request for certain variable data).

Hill argues that a construction that requires the main and remote computers to actually store certain kinds of data improperly imports a limitation from the specification into the claim. The Court disagrees because it is the claim language itself that provides the definitional parameters for the main and remote computer elements. The requirements that certain data be stored in the memory of either the main or remote computer is delineated in the other elements of Claim 30. Apparently, Hill recognizes this fact at some level because its proposed definitions end with “as required by subsequent limitations within the claim.” Pl.’s Claim Constr. Chart, at 1. Clearly, as Hill suggests, the remaining elements of Claim 30 require that the main and remote computer memories actually store certain data. The Court finds no improper importation of a limitation from the specification.

Accord Laitram, 863 F.2d at 858.

For the foregoing reasons, the Court concludes that the “main computer” phrase means: “a computer that has a memory in which variable data, constant data, and a main revision status indicating the revision level of the constant data is stored.” The “remote computer” phrase means: “a computer that has a memory in which constant data and a remote revision status indicating the revision level of the constant data is stored.”

The parties agree that the remaining elements of Claim 30 are in means-plus-function format. Therefore, for each element the Court first must identify the claimed function. *See Northrup Grumman Corp. v. Intel Corp.*, 325 F.3d 1346, 1350 (Fed. Cir. 2003); *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1318 (Fed. Cir. 2003). Once the claimed function is determined for each mean-plus-function element, the Court must identify the corresponding structure in the written description for performing that function. *See Northrup Grumman*, 325 F.3d at 1350; *Lockheed Martin*, 324 F.3d at 1319.

The parties do not dispute the claimed function of any of the means-plus-function elements of claim 30. *Compare* Pl.’s Claim Constr. Chart *with* Defs.’ Claim Constr. Chart. In large part, the Court does not disagree with those constructions. However, the parties do dispute the corresponding structure disclosed by the written description for the claimed functions. Therefore, the Court turns to resolution of these disputes.

**2. “Means for Transmitting the Remote Revision Status
from the Remote Computer to the Main Computer”**

The third element of Claim 30 is “means for transmitting the remote revision status from the

remote computer to the main computer.” ‘490 Patent, col. 25, *ll.* 28-29. The agreed function is “transmitting the remote revision status from the remote computer to the main computer.” Hill proffers the following structure:

Customer’s computer 18 transmits the revision status of constant data stored on customer’s computer 18 as illustrated at block 310 of Fig. 10B. See Col. 17, lines 26-30.

A communication tool, such as modem 20 associated with the customer’s computer 18, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, is configured to operate under the control of software programmed to perform the recited function. See Col. 8, lines 22-28; and Col. 11, lines 35-41.

Pl.’s Claim Constr. Chart, at 1. CompuServe proposes to replace the “See” of Hill’s description with “as described in.” Defs.’ Claim Constr. Chart, at 2. Moreover, CompuServe proposes to add an “as described in” reference to “Col. 9, lines 1-11.” *Id.*

The Court finds that the corresponding structure for the function of the “means for transmitting the remote revision status from the remote computer to the main computer” element is: “a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, associated with the customer’s computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent.” This list of options captures the structure discussed in the specification for transmitting the constant data revision status of the remote computer to the main computer.

The Court arrived at this definition by identifying the structures that correspond to the function of transmitting the constant data revision status from the customer’s computer. The customer’s computer must be part of the structure that transmits, as agreed by the parties, because the

specification states: "Customer's computer 18 changes to the transmit mode and transmits identification information including . . . the revision status of constant data stored on customer's computer 18 as illustrated in block 310 [of Figure 10B]." '490 Patent, col. 17, *ll.* 26-30.

The '490 patent also describes in further detail the specific structures on the customer's computer that allows it to transmit data. The specification states: "Customer's computer 18 is coupled to a modem 20. Modem 20 is either 2400 baud or 1200 baud modem which is Hayes compatible. . . . Modem 16 at vendor's location communicates with modem 20 at customer's location via a telephone communications lines [sic] 22." *Id.*, col. 8, *ll.* 23-29. The term "communicate" or "communicating" is used frequently in the '490 patent to describe the interaction between the main and remote computers. *See, e.g., id.* col. 1, *ll.* 46-47 ("The software handles all communications between customer's computer and vendor's computer."); *id.* col. 11, *ll.* 29-30 ("the communication and data handling software functions are then loaded onto customer's computer 18 at block 116. Customer's computer 18 then automatically dials the telephone number of vendor's computer 12 . . ."); *id.* col. 15, *ll.* 31-33 ("Assuming that no communication errors are detected during transmission of the serialized software . . ."); *id.* col. 17, *ll.* 6-7 ("Once all the data has been input customer's computer 18 calls the communications and data handling functions The software . . . is used to link customer's computer 18 with vendor's computer 12 for both the software downloading and for the downloading of variable and constant catalog data."); *id.* col. 17, *ll.* 18-21 ("Once communication between customer's computer 18 and vendor's computer 12 has been established, vendor's computer 12 will transmit a log on and prompt to customer's computer."). One of the reasons to "transmit" information is to "communicate." *See* WEBSTER'S THIRD NEW INT'L DICTIONARY, UNABRIDGED 2429 (Merriam-Webster Inc. 1981) ("WEBSTER'S UNABRIDGED") ("b(1): to pass on or spread about

: DISSEMINATE, COMMUNICATE . . .”). Logically, then, one of the means for “transmitting” from the customer’s computer is through a modem as described here. In addition, the specification describes other types of structures for communications:

It is understood that communications between vendor’s computer 12 and customer’s computer 18 [in Figure 3] could also be implemented on a wide area network (WAN) in which several different communication tools could be used. These communication tools include, for example, multiple local area networks, satellite communications, land lines, and optic lines.

‘490 Patent, col. 11, *ll.* 35-41. Therefore, the Court agrees with the parties that these structures should be included as hardware options for performing the transmitting function described in the third element of Claim 30.

Moreover, like the parties have concluded, the Court finds that from reading the specification one of ordinary skill in the art must conclude that there is software on the customer’s computer that is part of the structure for transmitting because the specification states:

“The electronic catalog system of the present invention includes software on the customer’s computer The software handles all communications between the customer’s computer and vendor’s computer.” ‘490 Patent, col. 1, *ll.* 42-47.

“[S]oftware on customer’s computer 18 includes communications software” *Id.* col. 8, *ll.* 61-62.

“The communication software stored . . . on customer’s computer 18 is a copyrighted communications software module available from CADDCENTERS in Indianapolis, Ind.” *Id.* col. 9, *ll.* 1-4.

“As illustrated in FIG. 4, the communications . . . software functions are then loaded onto customer’s computer 18 at block 116.” *Id.* col. 11, *ll.* 28-30.

“[C]ustomer’s computer 18 calls the communications . . . function[] as illustrated in block 116 of FIG. 4. The software in FIGS. 4-6 is used to link customer’s computer 18 with vendor’s computer 12 for . . . the downloading of variable and constant catalog data.” *Id.* col. 17, *ll.* 6-11.

“Customer’s computer 18 changes to the transmit mode and transmits . . . the revision status of the program or software and the revision status of constant data stored on customer’s computer 18 as illustrated in block 310 [of FIG. 10B]. *Id.* col. 17, *ll.* 26-30.

These sections teach that the customer’s computer uses communication software to communicate to or transmit to the main computer.

CompuServe suggests that the structure must include the specific communications software identified by the ‘490 patent’s specification to comply with the mandate of 35 U.S.C. § 112, ¶ 6. Hill asserts that this is unnecessary because the specific software referred to does not perform the function of transmitting the revisions status of the program or software as required by this claim element. Pl.’s Br., at 15 (citing *Dunsmore Aff.* ¶ 4c). Hill argues that the software discussed at column 9, lines 1-11 refers to functions unrelated to transmitting the revision status of the program; namely, variable data generation. *Id.* (citing *Dunsmore Aff.* ¶ 4c). That portion of the specification reads:

The communication software stored on vendor’s computer 12 and customer’s computer 18 is a copyrighted communications software module available from CADDCENTERS in Indianapolis, Ind. The variable data generation software stored on vendor’s computer 12 works as follows. Customer’s computer 18 generates a SQL statement that is sent to vendor’s computer 12. Vendor’s computer 12 interprets and uses the SQL statement in a conventional manner to access specified data within the variable data base stored in the memory of vendor’s computer 12. SQL is an ANSI standard computer language.

Id. col. 9, *ll.* 1-11.

While the Court agrees that the specific reference to how the variable data generation software on the vendor’s computer works is unrelated to the function of transmitting the remote revision status from the remote computer to the main computer, the first sentence clearly identifies that “[t]he communication software stored on . . . customer’s computer 18 is a copyrighted communications software module available from CADDCENTERS in Indianapolis, Ind[iana].” *Id.* col. 9, *ll.* 1-4.

Nothing in this language limits the function of the “communication software” specified to variable data generation. Moreover, the part of the specification that describes the types of software on the vendor or main computer delineates between “communication software” and “variable data generation software,” which suggests that they have two different functions. *See id.* col. 8, ll. 41-45. The specification states, in relevant part: “As illustrated in FIG. 1B, application software is stored on hard disk drive 30 of vendor’s computer 12. The application software on vendor’s computer 12 includes communications software, . . . [and] variable data generation software” *Id.* The only type of software disclosed in the specification that is designed to link the remote computer with the main computer to send or transmit anything is the communications software, which the patent specification describes as a particular software module available from a particular source. It seems to this Court that this is no different than saying that the “general purpose computer [has] in effect become a special purpose computer [because] it is programmed to perform particular functions pursuant to instructions from [particular] program software.” *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1348 (Fed. Cir. 1999) (quoting *In re Alappat*, 33 F.3d 1526, 1545 (Fed. Cir. 1994) (en banc)) (additions by this Court). *Cf. In re Bernhart*, 417 F.2d 1395, 1399-1400 (C.C.P.A 1969) (“[I]f a machine is programmed in a certain new and unobvious way, it is physically different from the machine without that program; its memory elements are differently arranged.”)

Therefore, the Court concludes that the function of the “means for transmitting the remote revision status from the remote computer to the main computer” element has the corresponding structure: “a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, associated with the customer’s computer that is configured to operate under the control of a copyrighted communications software module available from

CADDCENTERS in Indianapolis, Indiana, or its equivalent.”

**3. “Means for Comparing the Remote Revision Status
with the Main Revision Status”**

The fourth element of Claim 30 is “means for comparing the remote revision status with the main revision status.” *Id.* col. 25, ll. 30-31. The parties agree that the function is “comparing the remote revision status with the main revision status.” The Court cannot disagree. Hill proffers the following structure:

Vendor’s computer 12 checks the constant data revision status transmitted from customer’s computer 18 to vendor’s computer 12 at block 336 in Fig. 10A. The constant data revision status received from customer’s computer 18 is compared with the current revision status of the constant data on vendor’s computer 12. For instance, the revision status could be the revision level of the constant data. See Col. 18, lines 27-33.

Pl.’s Claim Constr. Chart, at 1. CompuServe proposes to replace the “See” of Hill’s description with “as described in.” Defs.’ Claim Constr. Chart, at 3.

The Court finds that the structure that corresponds to the function “comparing the remote revision status with the main revision status” is: “the vendor’s computer and the data base log of changes or revision data base under the control of software programmed to perform the recited function.” In several places the specification teaches that the vendor’s computer compares remote revision status of two types of information and uses a log to store them for comparison to that of the remote computer. With respect to the constant data revision status referred to in this element of Claim 30, the specification reads:

“Vendor’s computer 12 also checks the constant data revision status transmitted from customer’s computer 18 to vendor’s computer 12 at block 336 [of Figure 10A]. The constant data revision status received from customer’s computer 18 is compared with

the current revision status of the constant data on vendor's computer 12. For instance, the revision status could be the revision level of constant data." '490 Patent, col. 18, ll. 29-35.

"The step of . . . comparing the remote constant data revision status with the main constant data revising [sic] status in block 336 [of Figure 10A] is accomplished as follows. Each time the main program or the constant data stored in vendor's computer 12 is revised, a log of all changes that apply to a specific revision is kept. . . . When changes are made on vendor's computer 12 to either the constant data or software, the file names effected by the changes are kept in a revision data base and referenced to the next incremental update." *Id.* col. 18, ll. 47-59.

The first passage clearly refers to the vendor's computer as the structure that compares the revision status of the remote computer with that of the main or vendor's computer. The second passage further provides that the revision status is compared, in part, by using a log or data base of revision data stored on the vendor's computer. Therefore, the structure that corresponds to the means for comparing the remote revision status with the main revision status must include these files.

The Court also finds that one of ordinary skill in the art would conclude that some type of software controls the vendor's computer to perform the comparing function. The specification discloses "revision status and update software" that is stored on the vendor's computer. *Id.* col. 8, ll. 41-47 ("[A]pplication software is stored on hard disk drive 30 of vendor's computer 12. The application software on vendor's computer 12 includes . . . revision status and update software."); *id.* col. 1, ll. 42-44 ("The catalog system of the present invention includes software . . . on the vendor's computer."); *Id.* col. 2, ll. 12-14 ("The catalog system first checks to determine whether any of the constant data on customer's computer requires updating."). Although this is not specific software, like that identified for communicating or transmitting, it is enough for one of ordinary skill in the art to conclude that the vendor's computer performs the "comparing" function under the control of software.

For the foregoing reasons, the Court finds that the function of the “means for comparing the remote revision status with the main revision status” element has a corresponding structure: “the vendor’s computer and the data base log of changes or revision data base under the control of software programmed to perform the recited function.”

4. “Means for Selecting Portions of the Constant Data Stored in the Main Computer Memory that are Different From the Constant Data Stored in the Remote Memory”

The fifth element of Claim 30 is “means for selecting portions of the constant data stored in the main computer memory that are different from the constant data stored in the remote memory.”

Id. col. 25, ll. 32-34. The Court agrees with the parties that the function of this claim element is: “selecting portions of the constant data stored in the main computer memory that are different from the constant data stored in the remote memory.” Hill asserts that the corresponding structure is: “If the revision status of the constant data is not current, vendor’s computer 12 selects any updated constant data files at block 338 shown in Fig. 10A. See Col. 18, lines 32-37.” Pl.’s Claim Constr. Chart, at 2. CompuServe agrees with this structure, however, would replace the “See” in Hill’s construction with “as described in.” Defs.’ Claim Constr. Chart, at 3.

The Court finds that the corresponding structure for the function of “selecting portions of the constant data stored in the main memory that are different from the constant data stored in the remote memory” is: “the vendor’s computer configured to operate under the control of software programmed to perform the recited function as shown at block 338 of Figure 10A.” The specification discloses that “vendor’s computer12 compiles updated constant data files at block 338.” ‘490 Patent, col. 18, ll. 26-38. This is similar to how it “selects the file or files that need to be transmitted to customer’s

computer 18 to bring customer's computer 18 up to date with the latest software revision level as illustrated at block 324." *Id.* col. 17, l. 65, to *id.* col. 18, l. 1. Therefore, the vendor's computer must be part of the structure that performs the function of "selecting" portions of the constant data that are different.

The Court finds that one of ordinary skill in the art would conclude that there is software that controls the vendor's computer to perform the recited function. The specification teaches that "[t]he catalog system first checks to determine whether any of the constant data on the customer's computer requires updating" *Id.* col. 2, ll. 12-16. Moreover, the "system" includes software on the vendor's computer. *Id.* col. 1, ll. 42-44. Logically then, one of ordinary skill in the art would conclude that software must control the vendor's computer to perform the "selecting" function. However, there is no specific software disclosed in the specification. *See id.* col. 8, ll. 42-47 ("The application software on vendor's computer 12 includes . . . interpretation of data request software . . . and revision status and update software."). Thus, only a generic reference to controlling software is appropriate.

For these reasons, the Court finds that the function of the "means for selecting portions of the constant data stored in the main memory that are different from the constant data stored in the remote memory" element has a corresponding structure: "the vendor's computer configured to operate under the control of software programmed to perform the recited function as shown at block 338 of Figure 10A."

5. "Means for Transmitting Updated Portions of the Constant Data Stored in the Main Memory from the Main Computer to the Remote Computer"

The sixth element of Claim 30 is “means for transmitting updated portions of the constant data stored in the main memory from the main computer to the remote computer.” *Id.* col. 25, ll. 35-37. The Court agrees with the parties that the function of this claim element is: “transmitting updated portions of the constant data stored in the main memory from the main computer to the remote computer.” Hill asserts that the corresponding structure is:

Vendor’s computer 12 transmits an update file containing updated constant data to customer’s [computer] 18 at block 340 as shown in Fig. 10A. See Co. 18, lines 37-38.

A communication tool, such as a modem 16 associated with vendor’s computer 12, a multiport intelligent communications array 14, telephone lines, wide area networks, local area networks, satellite communications, land lines or optic lines, is configured to operate under the control of software programmed to perform the recited function. See Col. 8, lines 10-15, and Col. 11, lines 35-41.

Pl.’s Claim Constr. Chart, at 2. CompuServe agrees with this structure, however, would replace the “See” in Hill’s construction with “as described in.” Defs.’ Claim Constr. Chart, at 4. Moreover, CompuServe proposes to add an “as described in” reference to “Col. 9, lines 1-11.” *Id.*

The Court finds that the corresponding structure for the function “transmitting updated portions of the constant data stored in the main memory from the main computer to the remote computer” is: “a multi-port intelligent communications array coupled to a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, associated with the vendor’s computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent.” The Court arrived at this definition by identifying the structures that correspond to the function of transmitting constant data from the vendor’s computer. The vendor’s computer must be part of the structure that transmits, as agreed by the parties, because the specification states:

“Vendor’s computer 12 . . . transmits the update file to customer’s computer 18 at block 340.” ‘490 Patent, col. 18, *ll.* 36-40.

The ‘490 patent also describes in further detail the specific hardware structures on the vendor’s computer that allows it to transmit data. The specification states:

Vendor’s computer 12 is coupled to a multi-port intelligent communications array 14. Illustratively, communication’s array 14 is an Ultra INUX 1610A 16 port model available from Comtrol. Multi-port communications array 14 is coupled to a modem 16. Modem 16 is illustratively a model 2400S A available from Practical Peripherals. *Id.* col. 8, *ll.* 10-15.

Modem 16 at vendor’s location communicates with modem 20 at customer’s location via a telephone communications lines [sic] 22. *Id.* col. 8, *ll.* 26-28.

It is understood that communications between vendor’s computer 12 and customer’s computer 18 could also be implemented on a wide area network (WAN) in which several different communication tools could be used. These communication tools include, for example, multiple local area networks, satellite communications, land lines, and optic lines. *Id.* col. 11, *ll.* 35-41.

As discussed in Section III.A.2., the term “communicate” or “communications” is used extensively throughout the ‘490 patent specification to describe the “transmitting” or “sending” of information. Here, the patent specifically identifies the types of hardware used by the vendor’s computer to accomplish such “communication” or “transmissions.”

The Court agrees with the parties that the specification also discloses that software structure is used to transmit constant data from the main computer to the remote computer. Specifically, the specification states:

“[S]oftware handles all communications between the customer’s computer and vendor’s computer.” ‘490 Patent, col. 1, *ll.* 46-47.

“As illustrated in FIG. 1B, application software is stored on hard disk drive 30 of vendor’s computer 12. The application software on vendor’s computer 12 includes communications software . . .” *Id.* col. 8, *ll.* 41-44.

“The communications software stored on vendor’s computer 12 and customer’s computer 18 is a copyrighted communications software module available from CADDCENTERS in Indianapolis, Ind[iana].” *Id.* col. 9, *ll.* 1-4.

These sections teach that software stored on the vendor’s computer is used to communicate with the customer’s computer. Specifically, the specification teaches that “a copyrighted communications software module available from CADDCENTERS in Indianapolis, Ind[iana]” is used. *Id.* col. 9, *ll.* 2-4. Hill argues that reference to this specific software is improper. However, as discussed in Section III.A.2., the Federal Circuit has held that such specificity is proper when the specification discloses it because the “‘general purpose computer [has] in effect become a special purpose computer [because] it is programmed to perform particular functions pursuant to instructions from [particular] program software.’” *WMS Gaming*, 184 F.3d at 1348 (quoting *Alappat*, 33 F.3d at 1545) (additions by this Court).

For these reasons, the Court concludes that function of the “means for transmitting updated portions of the constant data stored in the main memory from the main computer to the remote computer” element has the corresponding structure of: “a multi-port intelligent communications array coupled to a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, associated with the vendor’s computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent.”

6. **“Means for Replacing Portions of the Constant Data Stored in the Remote Memory with the Updated Portions of the Constant Data Received from the Main Computer”**

The seventh element of Claim 30 is “means for replacing portions of the constant data stored

in the remote memory with the updated portions of the constant data received from the main computer.” ‘490 Patent, col. 25, ll. 38-40. The agreed function is “replacing portions of the constant data stored in the remote memory with the updated portions of the constant data received from the main computer.” Hill proffers the following structure:

Customer’s computer 18 replaces existing files with the updated data files received from vendor’s computer 12. After this update, the constant data on customer’s computer 18 is updated with the most recent current update available at vendor’s computer 12. The constant data is updated at block 347 as shown in figure 10B. See Col. 19, line 49 to Col. 30, line 4.

Pl.’s Claim Constr. Chart, at 2. CompuServe proposes to replace the “See” of Hill’s description with “as described in.” Defs.’ Claim Constr. Chart, at 5.

The Court finds that the corresponding structure for the function “replacing portions of the constant data stored in the remote memory with the updated portions of constant data received from the main computer” is: “the customer’s computer configured to operate under the control of software programmed to perform the recited function as shown at block 347 of Figure 10B.” The Court arrived at this construction by identifying the structure that corresponds to the function of replacing portions of the constant data in the remote memory with updated data from the main computer. The pertinent part of the specification reads:

Upon receipt of the data from vendor’s computer 12, customer’s computer 18 determines if the software update file is a dummy file or if there is valid update information. If valid update information exists, customer’s computer 18 will replace and/or modify the file or files affected by the revision. Specifically, customer’s computer 18 uncompresses the update files at block 344 [of Figure 10B] and replaces existing files with the updated files. This includes . . . constant data updates. Customer’s computer 18 replaces stored files with the updated data files . . . received from vendor’s computer 12. After this update, . . . the constant data on customer’s computer 18 is updated with the most recent current update available at vendor’s computer 12. The . . . constant data is updated at block 347 [of Figure 10B].

Id. col. 19, *l.* 41 to *id.* col. 20, *l.* 4. This passage teaches that the customer's computer replaces the constant data files stored on the computer with the updated constant data files that it received from the main computer. It also teaches that the customer's computer performs this function at a particular point in the flow chart for the system.

Moreover, one of ordinary skill in the art would conclude that software on the customer's computer is used to perform the "replacing" function. The specification identifies that the "system includes software on the customer's computer" *Id.* col. 1, *ll.* 43-44. This disclosure, coupled with the disclosure that the customer's computer performs the replacement leads to the conclusion that software programmed to perform the "replacing" function controls the customer's computer.

For these reasons, the Court concludes that the function of the "means for replacing portions of the constant data stored in the remote memory with the updated portions of constant data received from the main computer" element has the corresponding structure: "the customer's computer configured to operate under the control of software programmed to perform the recited function as shown at block 347 of Figure 10B."

7. "Means for Transmitting Variable Data Related to a Selected Product Stored in the Main Memory from the Main Computer to the Remote Computer"

The eighth element of Claim 30 is "means for transmitting variable data related to a selected product stored in the main memory from the main computer to the remote computer." *Id.* col. 25, *ll.* 41-43. The agreed function is "transmitting variable data related to a selected product stored in the main memory from the main computer to the remote computer." Hill proffers the following structure:

Vendor's computer 12 transmits the variable data files to computer 18 at block 354 as shown in Fig. 11 A. See Col. 20, lines 9-10.

A communication tool, such as a modem 16 associated with the vendor's computer 12, a multi-port intelligent communications array 14, telephone lines, wide area networks, local area networks, satellite communications, land lines or optic lines, is configured to operate under the control of software programmed to perform the recited function. See Col. 8, lines 10-15 and Col. 11, lines 35-41.

Pl.'s Claim Constr. Chart, at 3. CompuServe proposes to replace the "See" of Hill's description with "as described in." Defs.' Claim Constr. Chart, at 6. Moreover, CompuServe proposes to add an "as described in" reference to "Col. 9, lines 1-11." *Id.*

The Court finds that the corresponding structure for the function "transmitting variable data related to a selected product stored in the main memory from the main computer to the remote computer" is: "a multi-port intelligent communications array coupled to a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, associated with the vendor's computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent." This list of options captures the structure disclosed by the specification for transmitting variable data from the vendor's computer to the customer's computer.

The Court arrived at this construction by identifying the structures that correspond to the function of transmitting data from the vendor's memory. The vendor's computer must be part of that structure because the specification teaches that "[v]endor's computer 12 transmits the variable data files at block 354 [of Figure 10A]." *Id.* col. 20, ll. 9-10.

The '490 patent specification also describes in further detail the types of hardware on the vendor's computer that is necessary for transmission of information. The specification states: "Vendor's computer 12 is coupled to a multi-port intelligent communications array 14. . . . Multi-port communications array 14 is coupled to a modem 16." *Id.* col. 8, ll. 10-14. As discussed in Section

III.A.2., above, the term “communicate” or “communications” is used frequently in the ‘490 patent to describe the interaction between or transmission of data between the main and remote computers.

See Section III.A.2.

The ‘490 patent specification also discloses other hardware that can be used to transmit data:

It is understood that communications between vendor’s computer 12 and customer’s computer 18 could also be implemented on a wide area network (WAN) in which several different communication tools could be used. These communication tools include, for example, multiple local area networks, satellite communications, land lines, and optic lines.

‘490 Patent, col. 11, ll. 35-41. Therefore, the structure must include the possibility for these hardware structures.

Moreover, like the parties have concluded, the Court finds that the specification teaches one of ordinary skill in the art that software on the vendor’s computer is part of the structure for transmitting variable data. The specification teaches:

“[S]oftware handles all communications between the customer’s computer and vendor’s computer.” *Id.* col. 2, ll. 46-47.

“As illustrated in FIG. 1B, application software is stored on hard disk drive 30 of vendor’s computer 12. The application software on vendor’s computer 12 includes communications software” *Id.* col. 8, ll. 41-44.

“The communications software stored on vendor’s computer 12 . . . is a copyrighted communications software module available from CADDCENTERS in Indianapolis, Ind[iana].” *Id.* col. 9, ll. 1-4.

Hill maintains that the software referred to at column 9, lines 1 through 4, does not pertain to the transmitting function, it is part of the variable data generation function. However, the Court disagrees. The first sentence of the paragraph that starts at line 1 of column 9 is a description of the specific software module that the vendor’s computer uses to perform communication functions.

Moreover, the part of the specification that describes the types of software on the vendor's computer delineates between "communication software" and "variable data generation software," which suggests that they have two different functions. *See id.* col. 8, ll. 41-45. In addition, the only software identified by the specification to "communicate" from the vendor's computer is the communication software identified at column 9, lines 1 through 4. Therefore, the Court concludes that the specific software disclosed by the patent, or its equivalents, must be part of the structure that performs this function. *Cf. WMS Gaming*, 184 F.3d at 1348; *Alappat*, 33 F.3d at 1545; *Bernhart*, 417 F.2d at 1399-1400.

For the foregoing reasons, the Court concludes that function of the "means for transmitting variable data related to a selected product stored in the main memory from the main computer to the remote computer" element has the corresponding structure: "a multi-port intelligent communications array coupled to a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, associated with the vendor's computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent."

8. "Means for Integrating Constant Data Related to the Selected Product Stored in the Remote Computer Memory with the Variable Data Related to the Selected Product Received from the Main Computer to Generate Said Information Data Related to the Selected Product Including both Constant Data and Variable Data"

The ninth element of Claim 30 is "means for integrating constant data related to the selected product stored in the remote computer memory with the variable data related to the selected product received from the main computer to generate said information data related to the selected product

including both constant data and variable data.” ‘490 Patent, col. 25, *ll.* 45-50. The agreed function is: “integrating constant data related to the selected product stored in the remote memory with the variable data related to the selected product received from the main computer to generate said information data related to the selected product including both constant data and variable data.” Hill’s proffered corresponding structure is: “Customer’s computer 18 integrates the variable data with the constant data on customer’s computer 18 at block 366 according to a map provided by vendor’s computer. See Col. 21, lines 38-41.” Pl.’s Claim Constr. Chart, at 3. CompuServe proposes to replace the “See” in Hill’s structure with “as described in.” Defs.’ Claim Constr. Chart, at 7.

The Court finds that the corresponding structure for the function “integrating constant data related to the selected product stored in the remote memory with the variable data related to the selected product received from the main computer to generate said information data related to the selected product including both constant and variable data” is: “customer’s computer as shown at block 366 of Figure 11B according to a map provided by vendor’s computer.” This structure adequately captures the structure disclosed by the ‘490 patent specification to perform this function.

The Court arrived at this construction by identifying the structure that corresponds to the function of integrating data on the remote or customer’s computer. The customer’s computer must be part of the structure that integrates, as agreed by the parties, because the specification teaches: “Customer’s computer 18 . . . integrates the variable data received with the constant data on customer’s computer 18 at block 366” ‘490 Patent, col. 21, *ll.* 38-40. Moreover, the specification teaches that the customer’s computer uses a “map,” that was transferred from the vendor’s computer, to integrate the data. The specification reads, in pertinent part:

“Vendor’s computer 12 transmits . . . a map to permit customer’s computer 18 to integrate the variable data with constant data on customer’s computer 18 as illustrated at block 356 [of Figure 11A].” *Id.* col. 20, ll. 10-14.

“Customer’s computer 18 . . . integrates the variable data received with the constant data on customer’s computer 18 at block 366 [of Figure 11B] according to the map provided by vendor’s computer 12.” *Id.* col. 21, ll. 38-41.

Therefore, the Court concludes that the “map” is part of the structure of the “means for integrating variable data” function of Claim 30. In other words, the “map” is part of the software on the customer’s computer that integrates the variable data with the constant data stored on the customer’s computer.

For the foregoing reasons, the Court concludes that the function of the “means for integrating constant data related to the selected product stored in the remote memory with the variable data related to the selected product received from the main computer to generate said information data related to the selected product including both constant data and variable data” element has the corresponding structure: “customer’s computer as shown at block 366 of Figure 11B according to a map provided by vendor’s computer.”

That completes the construction for Claim 30. The Court now turns to the construction of disputed claims dependent upon Claim 30.

B. CLAIM 31

Claim 31 depends on independent Claim 30. Claim 31 reads:

The system of claim 30, further comprising means for generating a map at the main computer and means for transmitting the map from the main computer to the remote computer along with the variable data to permit the integrating means to generate information related to the selected product including both constant data and variable data.

Id. col. 25, ll. 51-56. The preamble in this claim makes clear that it includes the limitations in Claim 30, plus at least the two added limitations. Both elements of this claim are written in “means-plus-function” format. Therefore, for each element the Court first must identify the claimed function. *See Northrup Grumman*, 325 F.3d at 1350; *Lockheed Martin*, 324 F.3d at 1318. Once the claimed function is determined, the Court must then identify the corresponding structure in the written description for performing that function. *See Northrup Grumman*, 325 F.3d at 1350; *Lockheed Martin*, 324 F.3d at 1319.

The first means-plus-function element of Claim 31 is “means for generating a map at the main computer.” ‘490 Patent, col. 25, ll. 51-52. The parties do not dispute that the claimed function of this element is “generating a map at the main computer.” The Court does not disagree with this proposed function. Hill proffers the following structure: “The main computer operating under the control of map generation software, shown in Fig. 1B, to perform the recited function.” Pl.’s Claim Constr. Chart, at 3. CompuServe would add an additional reference to the patent specification. CompuServe’s proposed construction is: “The main computer operating under the control of map generation software, shown in Fig. 1B, such software being described at Col. 2[0], line 43 to Col. 21, line 35, to perform the recited function.” Defs.’ Claim Constr. Chart, at 7 (emphasis deleted).

The Court finds that the corresponding structure for the function “generating a map at the main computer” is: “map generation software that controls the vendor’s computer 12.” This is the only structure disclosed by the ‘490 patent’s specification for generating a map at the main computer.

The ‘490 patent specification teaches that the vendor’s computer creates a map that is transmitted to customer’s computer. The pertinent part of the specification reads: “The following is a description of the ‘map’ created by vendor’s computer 12 to permit customer’s computer 18 to

integrate both constant and variable data into a single sheet.” ‘490 Patent, col. 20, *ll.* 15-18. The specification goes on to describe the “map” that is created by the vendor’s computer:

The actual display of the data involves the use of a definition file (<File>.DEF). This file is the “map” that provided the instructions required to integrate all of the data on customer’s computer 18. The definition file is an ASCII text file in which each line of text refers to one specific display file, and the manner in which it is to be displayed.

Id. col. 20, *ll.* 15-18. The ‘490 patent specification also discloses the structure of the “map” file. *Id.* col. 20, *l.* 48 to *id.* col. 21, *l.* 24. However, the only structure that is disclosed in the specification that could create the map described here is the “map generation software” that is stored on the vendor’s computer. The specification states: “As illustrated in FIG. 1B, application software is stored on hard disk drive 30 of vendor’s computer 12. The application software on vendor’s computer 12 includes . . . map generation software.” *Id.* col. 8, *ll.* 41-44. Logically, then, the “map generation software” stored on the vendor’s computer is the software component of the structure that performs the function of generating the map. The software component controls the hardware component, the vendor’s computer.

The Court is not convinced that the entire description of the “map” as described by the specification at column 20, line 43, through column 21, line 24, is necessary structure for the “generating” means, as suggested by CompuServe. Although this part of the specification describes in detail what the map must contain, it does not speak to how the map is generated. Therefore, it is not structure that corresponds to the first means-plus-function element of Claim 31.

For the foregoing reasons, the Court concludes that the function of the “means for generating a map at the main computer” element of Claim 31 has a corresponding structure: “map generation software that controls the vendor’s computer.”

The next element of Claim 31 is “means for transmitting the map from the main computer to the remote computer along with the variable data to permit the integrating means to generate information related to the selected product including both constant data and variable data.” *Id.* col. 25, ll. 52-56. The parties agree that the function of this element is: “transmitting the map from the main computer to the remote computer along with the variable data to permit the integrating means to generate information related to the selected product including both constant and variable data.” Although the Court finds that some of this language is unnecessary to delineate the “function” of this element, it will accept the parties’ agreed proposal for the function because the superfluous language does not affect the construction of the corresponding structure. Hill proffers the following corresponding structure:

Vendor’s computer 12 transmits the variable data files and a map to customer’s computer 18 at blocks 364 and 356 as shown in Fig. 11A. See Col. 20, lines 9-13.

A communication tool, such as a modem 16 associated with vendor’s computer 12, a multi-port intelligent communications array 14, telephone lines, wide area networks, local area networks, satellite communications, land lines or optic lines, is configured to operate under the control of software programmed to perform the recited function. See Col. 8, lines 10-15 and Col. 11, lines 35-41.

Pl.’s Claim Constr. Chart, at 4. CompuServe proposes to replace the “See” in Hill’s description to “as described in.” Defs.’ Claim Constr. Chart, at 8. In addition, CompuServe proposes to add an “as described in” reference to “Col. 9, lines 1-11.” *Id.*

The Court finds that the corresponding structure for the function “transmitting the map from the main computer to the remote computer” is: “a multi-port intelligent communications array coupled to a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, associated with the vendor’s computer that is configured

to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent.” This list of options captures the structure disclosed in the specification for transmitting the map from the main computer to the remote computer.

The Court arrived at this definition by identifying the structures in the specification that correspond to the function of transmitting the map from the main computer. The vendor’s computer must be part of the structure that transmits, as agreed by the parties, because the specification states: “Vendor’s computer 12 transmits . . . a map to . . . customer’s computer 18 . . . as illustrated at block 356 [of Figure 11A].” *Id.* col. 20, *ll.* 9-14. Moreover, as with the other “means for transmitting” elements, the specification teaches that other hardware on the main computer is structure that “communicates” or “transmits” files. The specification reads, in pertinent part:

“Vendor’s computer 12 is coupled to a multi-port intelligent communications array 14. Illustratively, communications’ array 14 is an Ultra INUX 1610A 16 port model available from Comtrol. Multi-port communications array 14 is coupled to a modem 16. Modem 16 is illustratively a model 2400S A available from Practical Peripherals.” *Id.* col. 8, *ll.* 10-15.

“Modem 16 at vendor’s location communicates with modem 20 at customer’s location via a telephone communications lines [sic] 22.” *Id.* col. 8, *ll.* 26-28.

“It is understood that communications between vendor’s computer 12 and customer’s computer 18 could also be implemented on a wide area network (WAN) in which several different communication tools could be used. These communication tools include, for example, multiple local area networks, satellite communications, land lines, and optic lines.” *Id.* col. 11, *ll.* 35-41.

As discussed in Section III.A.2., the term “communicate” or “communications” is used extensively throughout the ‘490 patent specification to describe the “transmitting” or “sending” of information. Here, the patent specifically identifies the types of hardware used by the main or vendor’s computer

to accomplish such “communication” or “transmission.”

The Court agrees with the parties that the specification also discloses that software structure is used to transmit files, like the map, from the main computer to the remote computer. Specifically, the specification states:

“[S]oftware handles all communications between the customer’s computer and vendor’s computer.” ‘490 Patent, col. 1, *ll.* 46-47.

“As illustrated in FIG. 1B, application software is stored on hard disk drive 30 of vendor’s computer 12. The application software on vendor’s computer 12 includes communications software” *Id.* col. 8, *ll.* 41-44.

“The communications software stored on vendor’s computer 12 . . . is a copyrighted communications software module available from CADDCENTERS in Indianapolis, Ind[iana].” *Id.* col. 9, *ll.* 1-4.

These sections teach that the software stored on the vendor’s computer is used to communicate with the customer’s computer. Specifically, the specification teaches that “a copyrighted communications software module available from CADDCENTERS in Indianapolis, Ind[iana]” is used. *Id.* col. 9, *ll.* 2-4. Hill disputes that reference to this specific software is proper. However, as discussed in Section III.A.2., the Federal Circuit has held that such specificity is proper when the specification discloses a specific program because the ““general purpose computer [has] in effect become a special purpose computer [because] it is programmed to perform particular functions pursuant to instructions from [particular] program software.”” *WMS Gaming*, 184 F.3d at 1348 (quoting *Alappat*, 33 F.3d at 1545) (additions by this Court).

For these reasons, the Court concludes that the “means for transmitting the map from the main computer to the remote computer” has the corresponding structure of: “a multi-port intelligent communications array coupled to a modem, telephone lines, wide area networks, local area networks,

satellite communications, land lines, or optic lines, associated with the vendor's computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent."

That completes the construction for Claim 31. The Court now turns to Claim 32.

C. CLAIM 32

Claim 32 also depends upon Claim 30. Claim 32 reads:

The system of claim 30, wherein the means for transmitting updated portions of the constant data stored in the main memory from the main computer to the remote computer also transmits an updated remote revision status identical to the main revision status from the main computer to the remote computer.

'490 Patent, col. 25, ll. 57-62. The preamble of this claim makes clear that it includes the limitations in Claim 30, plus at least the added limitations. This claim is written in "means-plus-function" format. Therefore, the Court first must identify the claimed function. *See Northrup Grumman*, 325 F.3d at 1350; *Lockheed Martin*, 324 F.3d at 1318. Once the claimed function is determined, the Court must then identify the corresponding structure in the written description for performing that function. *See Northrup Grumman*, 325 F.3d at 1350; *Lockheed Martin*, 324 F.3d at 1319.

There is one "means-plus-function" element in Claim 32. The parties do not dispute that the function of this claim is "transmits an updated remote revision status identical to the main revision status from the main computer to the remote computer." Although the Court would change the word "transmits" to "transmitting" in the parties construction of the function, the corresponding structure revealed in the specification is not changed by the difference in wording of the function. Therefore, the Court accepts the parties' agreed construction of the function of Claim 32. Hill proffers the

following corresponding structure:

The constant data updating step also illustratively includes the step of transmitting a new remote revision status identical to the main revision status from the main computer to the remote computer. See Col. 4, lines 5-8.

A communication tool, such as a modem 16 associated with vendor's computer 12, a multi-port intelligent communications array 14, telephone lines, wide area networks, local area networks, satellite communications, land lines or optic lines, is configured to operate under the control of software programmed to perform the recited function. See Col. 8, lines 10-15 and Col. 11, lines 35-41.

Pl.'s Claim Constr. Chart, at 4. CompuServe proposes to replace the "See" in Hill's description with "as described in." Defs.' Claim Constr. Chart, at 9. In addition, CompuServe proposes to add an "as described in" reference to "Col. 9, lines 1-11." *Id.*

The Court finds that the corresponding structure for the function "transmitting . . . an updated remote revision status identical to the main revision status from the main computer to the remote computer" is: "a multi-port intelligent communications array coupled to a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, associated with the vendor's computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent."

The Court arrived at this definition by identifying the structures disclosed by the specification that transmit "an updated remote revision status identical to the main revision status from the main computer to the remote computer." *Id.* col. 25, ll. 60-62. The vendor's computer must be part of this structure because the specification states:

"The constant data updating step also illustratively includes the step of transmitting a new remote revision status identical to the main revision status from the main computer to the remote computer." *Id.* col. 4, ll. 5-8.

“[V]endor’s computer 12 selects the file or files that need to be transmitted to customer’s computer 18 to bring customer’s computer 18 up do date with the latest software revision level Vendor’s computer 12 compresses the files into a single update file at block 326 [of Figure 10A]. . . . [A]n update file is always transmitted from vendor’s computer 12 to customer’s computer 18.” *Id.* col. 17, *l.* 65 to col. 18, *l.* 11.

The ‘490 patent also describes in further detail the specific hardware structures on the vendor’s computer that allows it to transmit data. The specification states:

“Vendor’s computer 12 is coupled to a multi-port intelligent communications array 14. Illustratively, communication’s array 14 is an Ultra INUX 1610A 16 port model available from Comtrol. Multi-port communications array 14 is coupled to a modem 16. Modem 16 is illustratively a model 2400S A available from Practical Peripherals.” *Id.* col. 8, *ll.* 10-15.

“Modem 16 at vendor’s location communicates with modem 20 at customer’s location via a telephone communications lines [sic] 22.” *Id.* col. 8, *ll.* 26-28.

“It is understood that communications between vendor’s computer 12 and customer’s computer 18 could also be implemented on a wide area network (WAN) in which several different communication tools could be used. These communication tools include, for example, multiple local area networks, satellite communications, land lines, and optic lines.” *Id.* col. 11, *ll.* 35-41.

As discussed in Section III.A.2., the term “communicate” or “communications” is used extensively throughout the ‘490 patent specification to describe the “transmitting” or “sending” of information. Here, the patent specifically identifies the types of hardware used by the vendor’s computer to accomplish such “communication” or “transmissions.”

The Court also agrees with the parties that the specification discloses that software structure is used to transmit the updated remote revision status from the main computer to the remote computer. Specifically, the specification teaches that “[t]he application software on vendor’s computer 12 includes communications software” *Id.* col. 8, *ll.* 42-44. Moreover, “[t]he communications software stored on vendor’s computer 12 . . . is a copyrighted communications

software module available from CADDCENTERS, in Indianapolis, Ind[iana].” *Id.* col. 9, ll. 1-4. These passages teach that software stored on the vendor’s computer is used to communicate to or transmit to the remote computer. The specification teaches that a specific software module is used. *Id.* Hill disputes that reference to this specific software is proper. However, as discussed in prior sections, the Federal circuit has held that such specificity is proper when the specification discloses a special algorithm or program because the “general purpose computer [has] in effect become a special purpose computer [because] it is programmed to perform particular functions pursuant to instructions from [particular] program software.” *WMS Gaming*, 184 F.3d at 1348 (quoting *Alappat*, 33 F.3d at 1545) (additions by this Court).

For these reasons, the Court concludes that the function of the “means for transmitting . . . an updated remote revision status identical to the main revision status from the main computer to the remote computer” element has the corresponding structure: “a multi-port intelligent communications array coupled to a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, associated with the vendor’s computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent.”

This completes the construction for Claim 32, and for all disputed claims that depend upon Claim 30. The Court turns now to the next independent claim in dispute.

D. CLAIM 35

1. “Main Computer” and “Remote Computer”

Claim 35 is an independent claim. The first two elements of Claim 35 are a “main computer”

element and a “remote computer” element. Like with the main and remote computer elements of Claim 30, the parties dispute whether or not these elements require that the computer memory actually store the data referred to in the claim element. Similarly to Claim 30, the remaining elements of Claim 35 provide definitional parameters for the required storage of certain data in the main and remote computers. *See* ‘490 Patent, col. 26, ll. 30-53. Therefore, without repeating the analysis in Section III.A.1., but incorporating it by reference, the Court finds that the main and remote computer elements of Claim 35, similarly to those elements in Claim 30, require that certain data is stored on the respective computers.

The Court concludes that the “main computer” phrase of Claim 35 means: “a computer that has memory in which variable data and constant data related to a plurality of products is stored.” The “remote computer” phrase of Claim 35 means; “a computer that has memory in which constant data related to a plurality of products is stored.”

The parties agree that the remaining elements of Claim 35 are in means-plus-function format. Therefore, for each element the Court first must identify the claimed function. *See Northrup Grumman Corp. v. Intel Corp.*, 325 F.3d 1346, 1350 (Fed. Cir. 2003); *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1318 (Fed. Cir. 2003). Once the claimed function is determined for each mean-plus-function element, the Court must identify the corresponding structure in the written description for performing that function. *See Northrup Grumman*, 325 F.3d at 1350; *Lockheed Martin*, 324 F.3d at 1319.

The parties do not dispute the claimed function of any of the means-plus-function elements of claim 35. In large part, the Court does not disagree with those constructions. However, the parties do dispute the corresponding structure disclosed by the written description for the claimed functions.

Therefore, the Court turns directly to resolution of these disputes.

2. “Means for Transmitting a Request for Variable Data Related to a Selected Product from the Remote Computer to the Main Computer”

The third element of Claim 35 reads: “means for transmitting a request for variable data related to a selected product from the remote computer to the main computer.” ‘490 Patent, col. 26, ll. 30-33. The agreed function is: “transmitting a request for variable data related to a selected product from the remote computer to the main computer.” Hill proffers the following corresponding structure:

Customer’s computer 18 transmits a variable data request file to vendor’s computer 12 at block 348 as shown in Fig. 11B.” See Col. 20, lines 5-7.

A communication tool, such as a modem 20 associated with the customer’s computer 18, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, is configured to operate under the control of software programmed to perform the recited function. See Col. 8, lines 22-28; and Col. 11, lines 35-41.

Pl.’s Claim Constr. Chart, at 5. CompuServe proposes to replace the “See” in Hill’s description with “as described in.” Defs.’ Claim Constr. Chart, at 10-11. Moreover, CompuServe proposes to add an “as described in” reference to “Col. 9, lines 1-11.” *Id.* at 11.

The Court finds that the corresponding structure for the function “transmitting a request for variable data related to a selected product from the remote computer to the main computer” is: “a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, associated with the customer’s computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent.” This construction captures the structures disclosed by the

specification for transmitting a request for variable data from the remote computer.

The Court arrived at this definition by identifying the structures in the specification that correspond to the function of transmitting a request from the customer's computer. Clearly, the customer's computer must be part of the structure that transmits, as agreed by the parties, because the specification states: "[C]ustomer's computer 18 transmits a variable data request file to vendor's computer 12 at block 348." '490 Patent, col. 20, ll. 5-7. Moreover, the specification states:

Because all of the general catalog data is resident on the customer's computer, the normal browsing the user might do is accomplished locally at the customer's computer. The customer's computer automatically connects itself to vendor's computer and automatically requests the needed information only after the desired product has been selected from data on the customer's computer.

Id. col. 2, ll. 52-54.

The specification also discloses other hardware on the customer's computer that is used to transmit information. The specification states, in relevant part:

"Customer's computer is coupled to a modem. . . . Modem 16 at vendor's location communicates with modem 20 at customer's location via telephone communications lines [sic] 22." *Id.* col. 8, ll. 22-28.

"It is understood that communications between vendor's computer 12 and customer's computer 18 could also be implemented on a wide area network (WAN) in which several different communication tools could be used. These communication tools include, for example, multiple local area networks, satellite communications, land lines, and optic lines." *Id.* col. 11, ll. 35-41.

These passages from the specification teach that the customer's computer has a modem and/or the customer's computer uses a wide area network in combination with telephone lines or other communication tools to transmit information to the main computer. As discussed in Section III.A.2., the term "communicate" or "communicating" is used frequently in the '490 patent to describe the interaction between the main and remote computers. One reason to "transmit" information is to

“communicate” it. Given these teachings, one of ordinary skill in the art would conclude that the structures described in these passages are used to transmit from the customer’s computer.

In addition, like the parties have concluded, the Court finds that a reading of the specification makes clear to one of ordinary skill in the art that software is also used to transmit from the remote or customer’s computer. Specifically, the specification states:

“The electronic catalog system of the present invention includes software on the customer’s computer The software handles all communications between the customer’s computer and vendor’s computer.” ‘490 Patent, col. 1, *ll.* 42-47.

“[S]oftware on customer’s computer includes communications software” *Id.* col. 8, *ll.* 61-62.

“The communications software stored . . . on customer’s computer 18 is a copyrighted communications software module available from CADDCENTERS in Indianapolis, Ind[iana].” *Id.* col. 9, *ll.* 1-4.

“As illustrated in FIG. 4, the communications . . . software functions are then loaded onto customer’s computer 18 at block 116.” *Id.* col. 11, *ll.* 28-30.

“[C]ustomer’s computer 18 calls the communications . . . function[] as illustrated in block 116 of FIG. 4. The software in FIGS. 4-6 is used to link customer’s computer 18 with vendor’s computer 12 for . . . downloading of variable and constant catalog data.” *Id.* col. 17, *ll.* 6-11.

“Customer’s computer 18 transmits a variable data request file to vendor’s computer 12 at block 348 [of Figure 10B].” *Id.* col. 20, *ll.* 5-7.

These sections of the specification teach that the customer’s computer uses special communications software to communicate with the main computer. Therefore, one of ordinary skill in the art would conclude that the software configures the customer’s computer to transmit a variable data request.

Hill argues that the software discussed at column 9, lines 1-11 refers to functions unrelated to transmitting information; he argues that passage refers only to variable data generation. Pl.’s Br., at 15 (citing *Dunsmore Aff.* ¶ 4c). However, nothing in the language of the specification at column

9, lines 1-4, where it reads: “The communication software stored on . . . customer’s computer 18 is a copyrighted communications software module available from CADDCENTERS in Indianapolis, Ind[iana],” ‘490 Patent, col. 9, *ll.* 1-4, limits the function of the “communications software module” disclosed there to “variable data generation.” Moreover, this “communications software module” clearly refers to the preceding paragraphs that disclose the types of software stored on the hard drive of customer’s computer, which includes “communications software.” *See id.* col. 8, *ll.* 61-62. One of ordinary skill in the art would conclude that the “communications software” referenced in the remainder of the specification is the “communications software module” disclosed at column 9, lines 1-4.²

For the foregoing reasons, the Court concludes that the “means for transmitting a request for variable data related to a selected product from the remote computer to the main computer” has the corresponding structure: “a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines, associated with the customer’s computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent.”

3. “Means for Comparing Constant Data in the Remote Memory with Constant Data in the Main Memory”

The fourth element of Claim 35 is “means for comparing constant data in the remote memory

²The specification also discloses that “data request software” is stored on the hard drive of customer’s computer. *See* col. 8, *ll.* 61-63. Although the Court recognizes that this software may be involved with generating the actual data request, the disclosures regarding the communications software correspond directly to the function of “transmitting” as required by the claim limitation. Therefore, the Court concluded that the data request software is not structure that corresponds to the function of transmitting.

with constant data in the main memory.” *Id.* col. 26, *ll.* 33-34. The parties agree that the function is: “comparing constant data in the remote memory with constant data in the main memory.” Hill proffers the following corresponding structure:

Vendor’s computer 12 checks the constant data revision status transmitted from customer’s computer 18 to vendor’s computer 12 at block 336. The constant data revision status received from customer’s computer 18 is compared with the current revision status of the constant data on vendor’s computer 12. For instance, the revisions status could be the revision level of the constant data. See Col. 18, lines 27-33.

Pl.’s Claim Constr. Chart, at 5. CompuServe proposes to replace the “See” in Hill’s construction with “as described in.” Defs.’ Claim Constr. Chart, at 11.

The Court finds that the corresponding structure for the function “comparing constant data in the remote memory with constant data in the main memory” is: “vendor’s computer, as shown at block 336 of Figure 10A, configured to operate under the control of software programmed to perform the recited function.” This description best captures the structure disclosed in the specification for comparing constant data in the remote memory with that in the main memory. It is clear from the specification that the vendor’s computer is part of the structure that compares the constant data in the remote memory with that in the main memory. The specification teaches:

Vendor’s computer 12 also checks the constant data revision status transmitted from customer’s computer 18 to vendor’s computer 12 at block 336 [of Figure 10A]. The constant data revision status received from customer’s computer 18 is compared with the current revision status of the constant data on vendor’s computer 12. For instance, the revision status could be the revision status of the constant data.

‘490 Patent, col. 18, *ll.* 29-35.

In addition, the specification discloses that the vendor’s computer uses some type of software to make the appropriate comparison. The specification reads:

[T]he step of comparing the remote constant data revision status with the main constant data revisi[on] status in block 336 is a [sic] accomplished as follows. Each time the . . . constant data on vendor's computer 12 is revised, a log of all changes that apply to a specific revision is kept. Starting with the revision level 0, all software and constant data are the same on vendor's computer 12 and the customer's computer 18. When changes are made on vendor's computer 12 to . . . the constant data . . . , the file names effected [sic] by the changes are kept in a revision data base and referenced to the next incremental update.

Id. col. 18, ll. 48-59. After reading this passage, one of ordinary skill in the art would conclude that software on the vendor's computer is configured to perform the comparison. Therefore, software must be part of the structure for the means for comparing the constant data in remote computer with that in the main computer. Moreover, the specification discloses that "[t]he application software on vendor's computer 12 includes . . . revision status and update software." *Id.* col. 8, ll. 42-47. It is unclear whether or not this software actually makes the comparison, although it does suggest that software on the vendor's computer is used to compare one set of data with another to make the revision data base referenced later in the specification. However, unlike the specific disclosure of software to perform the transmitting functions, the specification does not disclose specific software for comparing.

For the foregoing reasons, the Court concludes that the function of the "means for comparing constant data in the remote memory with constant data in the main memory" element has the corresponding structure: "vendor's computer, as shown at block 336 of Figure 10A, configured to operate under the control of software programmed to perform the recited function."

4. "Means for Determining which Portions of the Constant Data Stored in the Main Memory are Different from the Constant Data Stored in the Remote Memory"

The fifth element of Claim 35 is: "means for determining which portions of the constant data

stored in the main memory are different from the constant data stored in the remote memory.” *Id.* col. 26, *ll.* 35-37. The parties agree that the claimed function is: “determining which portions of the constant data stored in the main memory are different from the constant data stored in the remote memory.” Hill proffers the following corresponding structure: “If the revision status of the constant data is not current, updated constant data is identified to be transmitted to the customer’s computer 18 at block 340. See Col. 18, lines 33-37.” Pl.’s Claim Constr. Chart, at 5. CompuServe proposes to replace the “See” in Hill’s construction with “as described in.” Defs.’ Claim Constr. Chart, at 12.

The Court finds that the structure that corresponds to the function “determining which portions of the constant data stored in the main memory are different from the constant data stored in the remote memory” is: “the vendor’s computer, as shown at block 340 of Figure 10A, configured to operate under the control of software programmed to perform the recited function.” The specification teaches that it is the vendor’s computer that determines which constant data stored in the main memory is different from that in the remote memory. The specification teaches:

“Once the desired catalog data has been selected, the electronic catalog system automatically calls the vendor’s computer and logs on. The catalog system first checks to determine whether any of the constant data on the customer’s computer requires updating.” ‘490 Patent, col. 2, *ll.* 9-14.

“Vendor’s computer 12 also checks the constant data revision status transmitted from customer’s computer 18 The constant data revision status received from customer’s computer 18 is compared with the current revision status of the constant data on vendor’s computer 12. For instance, the revision status could be the revision level of the constant data. If the revision status of the constant data is not current, vendor’s computer 12 compiles updated constant data files at block 338, adds the updated constant data files to the update file block 339 [sic], and transmits the update file to customer’s computer 18 at block 340. If the constant data revision status is the same as the revision status on vendor’s computer 12, vendor’s computer 12 does not the [sic] add constant data file to the update file.” *Id.* col. 18, *ll.* 29-43.

It is clear from these passages that the vendor’s computer decides whether or not the constant data

in its memory is the same as that in the remote memory because the vendor's computer is the object of the two sentences in the second disclosure that describe how the system identifies which constant data is different and which is the same. The specification reads: "If the revision status of the constant data is not current, vendor's computer 12 compiles updated constant data files If the constant data revision status is the same as the revision status on vendor's computer 12, vendor's computer 12 does not the [sic] add constant data file to the update file." *Id.* col. 18, *ll.* 35-43.

One of ordinary skill in the art would also conclude from reading the passages cited above that to perform this function the vendor's computer must be controlled by software that is configured to determine which constant data is different. The specification teaches that "[t]he catalog system first checks to determine whether any of the constant data on the customer's computer requires updating." *Id.* col. 2, *ll.* 12-14. In this context, "the catalog system" must refer to "[t]he electronic catalog system of the present invention [that] includes . . . software on the vendor's computer." *Id.* col. 1, *ll.* 42-44. Therefore, it is logical to conclude that software is part of the structure that determines which constant data in the main memory is the same as that in the remote memory. Moreover, the '490 patent specification discloses that the vendor's computer stores application software that includes "revision status and update software," which supports the conclusion that software is part of the structure that determines the differences in data sets. *See id.* col. 8, *ll.* 42-47. However, unlike in the case of communications or transmission software, no specific software is mentioned in the specification.

For the foregoing reasons, the Court concludes that the function of the "means for determining which portions of the constant data stored in the main memory are different from the constant data stored in the remote memory" element has a corresponding structure: "the vendor's computer, as shown at block 340 of Figure 10A, configured to operate under the control of software programmed

to perform the recited function.”

5. The Remaining Elements of Claim 35

The remaining elements of Claim 35, elements 6-9, are identical to elements 6-9 of Claim 30. Therefore, the Court concludes that the construction of those claim elements would be the same. The Court has charted the claim elements, has underlined the function, and then listed the corresponding structures for each element function below.

Claim 35 Element	Corresponding Structure
means for <u>transmitting updated portions of the constant data stored in the main memory from the main computer to the remote computer</u>	a multiport intelligent communications array coupled to a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines or optic lines associated with the vendor's computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent
means for <u>replacing portions of the constant data stored in the remote memory with the updated portions of constant data received from the main computer</u>	the customer's computer configured to operate under the control of software programmed to perform the recited function as shown at block 347 of Figure 10B
means for <u>transmitting variable data related to the selected product stored in the main memory from the main computer to the remote computer</u> ; and	a multiport intelligent communications array coupled to a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines or optic lines associated with the vendor's computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent

Claim 35 Element	Corresponding Structure
means for <u>integrating constant data related to the selected product stored in the remote memory with the variable data related to the selected product received from the main computer</u> to generate the product information data related to the selected product including both constant and variable data	customer's computer, as shown at block 366 of Figure 10B, according to a map provided by vendor's computer

E. CLAIM 36

Claim 36 depends upon Claim 35. Claim 36 reads: "The system of claim 35, further comprising means for automatically connecting the remote computer to the main computer." '490 Patent, Col. 26, ll. 54-56. The preamble in this claim makes clear that it includes the limitations in Claim 35, plus at least the added limitation. This claim is written in "means-plus-function" format. Therefore, the Court first must identify the claimed function. *See Northrup Grumman*, 325 F.3d at 1350; *Lockheed Martin*, 324 F.3d at 1318. Once the claimed function is determined, the Court must then identify the corresponding structure in the written description for performing that function. *See Northrup Grumman*, 325 F.3d at 1350; *Lockheed Martin*, 324 F.3d at 1319.

The parties agree that the function disclosed in Claim 36 is "automatically connecting the remote computer to the main computer." Hill proffers the following corresponding structure:

Customer's computer 18 automatically connects to vendor's computer 12. For example, in the preferred embodiment using modem 20, the automatic connection is shown in block 118 of Fig. 4. See Col. 11, lines 30-32; Col. 17, lines 11-14. Also for example, in other disclosed communication tools such networks, customer's computer 18 automatically connects to vendor's computer 12 without the dial-up requirement of the modem 20 from the preferred embodiment.

Pl.'s Claim Constr. Chart, at 7. CompuServe proposes to replace the "See" in Hill's construction with

“as described in.” Defs.’ Claim Constr. Chart, at 15.

The Court finds that the structure that corresponds to the function of the “means for automatically connecting the remote computer to the main computer” element is: “a modem and telephone lines, or a network, satellite communications, land lines or optic lines, associated with the customer’s computer that is configured to operate under the control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent.” The Court finds that this most accurately describes the structure disclosed in the ‘490 patent’s specification for “automatically connecting the remote computer to the main computer.”

Clearly, as the parties agree, the customer’s computer is part of the structure for “automatically connecting the remote computer to the main computer” because the specification teaches:

“Customer’s computer 18 then automatically dials the telephone number of vendor’s computer 12 as illustrated at block 118 [of Figure 4].” ‘490 Patent, col. 11, ll. 29-32.

“Customer’s computer 18 dials vendor’s computer 12 [sic] telephone number that was stored in the data file at the time of installation of the software.” *Id.* col. 17, ll. 11-14.

One of ordinary skill in the art would recognize that other hardware, or structure, on the customer’s computer actually dials the telephone. The specification confirms this finding; it states:

“Customer’s computer 18 is coupled to a modem 20. . . . Modem 16 at vendor’s location communicates with modem 20 at customer’s location via a telephone communications lines [sic] 22.” *Id.* col. 8, ll. 22-28.

In addition to a modem and telephone lines, the ‘490 patent teaches that other hardware may be used to connect the remote computer with the main computer. The specification states:

It is understood that communications between vendor’s computer 12 and customer’s computer 18 could also be implemented on a wide area network (WAN) in which several different communication tools could be used. These communication tools include, for example, multiple local area networks, satellite communications, land

lines, and optic lines.

Id. col. 11, *ll.* 35-41. The parties seem to agree that the customer's computer makes the "automatic connection" using these alternative structures, although their proffered construction does not clearly convey the options listed here. Nevertheless, one of ordinary skill in the art would recognize that these hardware options would perform the function of "automatically connecting" one computer to another.

In addition, the Court finds that the parties construction of the structure that performs the function of "automatically connecting" is incomplete. The specification also discloses that software is used to "automatically connect" the two computers. The specification teaches:

"The electronic catalog system of the present invention includes software on the customer's computer The software handles all communications between the customer's computer and vendor's computer." *Id.* col. 1, *ll.* 42-47.

"Once the desired catalog data has been selected, the electronic catalog system automatically calls the vendor's computer and logs on." *Id.* col. 2, *ll.* 9-12.

"The catalog system of the present invention automatically determines when it is necessary to log on to vendor's computer to retrieve additional data." *Id.* col. 2, *ll.* 46-49.

"Application software on customer's computer 18 includes communications software" *Id.* col. 8, *ll.* 61-62.

"The communications software stored on . . . customer's computer 18 is a copyrighted communications software module available from CADDCENTERS in Indianapolis, Ind[iana]." *Id.* col. 9, *ll.* 1-4.

"As illustrated in FIG. 4, the communications and data handling functions are then loaded onto customer's computer 18 at block 116. Customer's computer 18 then automatically dials the telephone number of vendor's computer 12 as illustrated at block 118." *Id.* col. 11, *ll.* 28-32.

"[C]ustomer's computer calls the communication and data handling functions as illustrated at block 116 of FIG. 4. The software in FIGS. 4-6 is used to link

customer's computer 18 with vendor's computer 12 Customer's computer 18 dials vendor's computer [sic] 12 telephone number that was stored in the data file at the time of installation of the software." *Id.* col. 17, *ll.* 6-14.

These passages explain that the software on the customer's computer handles communication functions and that it is the "system" that automatically connects the customer's computer with the main computer. One of ordinary skill in the art would conclude from these disclosures that the communications software on the customer's computer is the part of the "system" that controls the computer hardware to make the connection.

Another part of the specification confirms this conclusion. The specification states that the communications software on customer's computer "is used to link customer's computer 18 with vendor's computer 12." *Id.* col. 17, *ll.* 8-10. The ordinary meaning of "connect" is "link." Webster's dictionary provides the following definition for "connect": "to join, fasten, or link together usu[ally] by means of something intervening." WEBSTER'S UNABRIDGED, at 480. Clearly, then, in the context of the '490 patent specification, the "means for automatically connecting the remote computer to the main computer" must include the communications software on customer's computer. Moreover, the specification also identifies the "communications software" on the customer's computer as a "module available from CADDCENTERS in Indianapolis, Ind[iana]." '490 Patent, col. 9, *ll.* 3-4. Therefore, the Court finds that the communications software module identified is part of the structure that "automatically connects" the remote computer to the main computer.

For the foregoing reasons, the Court concludes that the function of the "means for automatically connecting the remote computer to the main computer" element of Claim 36 has a corresponding structure: "a modem and telephone lines, or a network, satellite communications, land lines or optic lines, associated with the customer's computer that is configured to operate under the

control of a copyrighted communications software module available from CADDCENTERS in Indianapolis, Indiana, or its equivalent.”

F. CLAIM 37

Claim 37 is dependent upon Claim 36, and is also written in means-plus-function format. The claim reads: “The system of claim 36, further comprising means for automatically disconnecting the remote computer from the main computer after the variable data related to the selected product is transmitted from the main computer to the remote computer.” *Id.* col. 26, ll. 57-61. The parties agree that the function of Claim 37 is: “automatically disconnecting the remote computer from the main computer after the variable data related to the selected product is transmitted from the main computer to the remote computer.” Hill proffers the following corresponding structure:

Vendor’s computer 12 automatically disconnects from customer’s remote computer 18. For example, in the preferred embodiment using modem 16, vendor’s computer 12 automatically logs off and disconnects the data link at block 358 as shown in Fig. 11A. See Col. 21, lines 32-34. Also for example, in other disclosed communications tools such as networks, vendor’s computer 12 automatically disconnects from the remote computer 18 after information is transmitted to the remote computer 18.

Pl.’s Claim Constr. Chart, at 7. CompuServe proposes to replace the “See” in Hill’s construction with “as described in.” Defs.’ Claim Constr. Chart, at 16.

The Court finds that the corresponding structure for the “automatically disconnecting” function in Claim 37 is: “a multiport intelligent communications array coupled to a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines associated with the vendor’s computer, as shown at block 358 of Figure 11A, configured to operate under the control of a copyrighted communications software module available from

CADDCENTERS of Indianapolis, Indiana, or its equivalent.” Although the specification discloses that both the vendor’s computer and the customer’s computer “automatically disconnect,” the vendor’s computer is the structure corresponding to this element because it is the structure that “automatically disconnects” “after the variable data . . . is transmitted from the main computer to the remote computer.” ‘490 Patent, col. 26, ll. 59-61.

The specification teaches:

“The customer’s computer automatically logs off vendor’s computer after the requested data is received.” *Id.* col. 2, ll. 56-57.

“Customer’s computer 18 detects the end of data received from vendor’s computer 12 at block 342. *Id.* col. 18, ll. 45-46.

“After [the variable data and map are] transmitted, vendor’s computer 12 automatically logs off and disconnects the data link at block 358 [of Figure 10A]. . . . Customer’s computer 18 receives the data files from vendor’s computer 12 at block 366 [of Figure 10B]. Customer’s computer then automatically disconnects the data link at block 362 [of Figure 10B].” *Id.* col. 21, ll. 32-37.

From these passages, it is clear that the vendor’s computer automatically disconnects the data link with the customer’s computer after it has transmitted the variable data and the integration map. Customer’s computer does not automatically disconnect until it has received the data that has been transmitted. Although this may seem like a minimal difference, Claim 37 specifically requires that the automatic disconnection occur “after the variable data related to the selected product is transmitted from the main computer to the remote computer.” *Id.* col. 26, ll. 59-61. Therefore, only the vendor’s computer performs the recited function.

Although the parties’ proffered structure seems to incorporate elements of the communications network on the vendor’s computer, it is incomplete. The parties proffer “in the preferred embodiment using modem 16 . . . [and] in other disclosed communications tools such as networks, vendor’s

computer 12 automatically disconnects from the remote computer 18 after information is transmitted” Pl.’s Claim Constr. Chart, at 7. But, if the communication elements on the vendor’s computer are part of the structure that “automatically disconnects,” and the Court agrees with the parties that they are part of that structure, then the specification discloses much more specific information about the hardware and software used to perform the function of “disconnecting.” With respect to hardware, the specification teaches:

“Vendor’s computer 12 is coupled to a multi-port intelligent communications array 14.” ‘490 Patent, col. 8, *ll.* 10-11.

“Multi-port communications array 14 is coupled to a modem 16.” *Id.* col. 8, *ll.* 13-14.

“Modem 16 at vendor’s location communicates with modem 20 at customer’s location via a telephone communications lines [sic] 22.” *Id.* col. 8, *ll.* 26-28.

“It is understood that communications between vendor’s computer 12 and customer’s computer 18 could also be implemented on a wide area network (WAN) in which several different communication tools could be used. These communication tools include, for example, multiple local area networks, satellite communications, land lines, and optic lines.” *Id.* col. 11, *ll.* 35-41.

Therefore, one of ordinary skill in the art would conclude that the structure for “automatically disconnecting” must include these elements of hardware on the vendor’s computer.

One of ordinary skill in the art would also conclude that the hardware on the vendor’s computer is configured to operate under software programmed to perform the function of “automatically disconnecting.” The specification teaches:

“The electronic catalog system of the present invention includes . . . software on the vendor’s computer. . . . The software handles all communications between customer’s computer and vendor’s computer.” *Id.* col. 1, *ll.* 42-47.

“The communication software stored on vendor’s computer 12 . . . is a copyrighted communications software module available from CADDCENTERS in Indianapolis, Ind[iana].” *Id.* col. 9, *ll.* 1-4.

"After [the variable data file and map are] transmitted, vendor's computer 12 automatically logs off and disconnects the data link at block 358." *Id.* col. 21, ll. 32-34.

These references suggest that the communications software controls the connection between the vendor's computer and the customer's computer. Therefore, one of ordinary skill in the art would conclude that the software would sever the connection when the transmitting (also being done by the vendor's computer with the communications software) is complete.

For the foregoing reasons, the Court concludes that the function of the "means for automatically disconnecting the remote computer from the main computer after the variable data related to the selected product is transmitted from the main computer to the remote computer" element of Claim 37 has a corresponding structure: "a multiport intelligent communications array coupled to a modem, telephone lines, wide area networks, local area networks, satellite communications, land lines, or optic lines associated with the vendor's computer, as shown at block 358 of Figure 11A, configured to operate under the control of a copyrighted communications software module available from CADDCENTERS of Indianapolis, Indiana, or its equivalent."

G. CLAIM 38

Claim 38 depends upon claim 35. Claim 38 reads:

The system of claim 35, further comprising means for storing and maintaining a main revision status in the memory of the main computer, the main revision status indicating the revision level of the constant data stored in the main computer, and means for storing a remote revision status in the memory of the remote computer, the remote revision status indicating the revision level of the constant data stored in the remote computer.

'490 Patent, col. 26, l. 62, to *id.* col. 27, l. 2. Claim 38 contains two means-plus-function elements.

The first element is: “means for storing and maintaining a main revision status in the memory of the main computer, the main revision status indicating the revision level of the constant data stored in the main computer.” *Id.* col. 26, ll. 62-66. The parties agree that the function of this element is “storing and maintaining a main revision status in the memory of the main computer.” Hill proffers the following corresponding structure: “When changes are made on vendor’s computer 12 to the constant data, the main revision status indicating the revision level of the constant data is maintained and stored in the main computer. See Col. 18, lines 54-57.” Pl.’s Claim Constr. Chart, at 7-8. CompuServe proposes to replace the “See” in Hill’s proffered construction with “as described in.” Defs’ Claim Constr. Chart, at 16-17.

The Court finds that the corresponding structure for the function “storing and maintaining a main revision status in the memory of the main computer” is: “a data base on the hard disk drive on vendor’s computer.” The Court arrived at this construction by identifying the structure in the specification that performs the function of “storing and maintaining a main revision status.” It is clear that the vendor’s computer is part of the structure, as the parties agree, because the specification states: “Each time the constant data stored in vendor’s computer 12 is revised, a log of all changes that apply to a specific revision is kept.” ‘490 Patent, col. 18, ll. 51-53. Furthermore, the specification teaches that “[t]he constant data revision status received from customer’s computer 18 is compared with the current revision status of the constant data on vendor’s computer 12. For instance, the revision status could be the revision level of the constant data.” *Id.* col. 18, ll. 31-35. Therefore, there must be a file or other structure for storing the revision status on the vendor’s computer.

The specification also teaches that certain files on the hard disk drive of vendor’s computer

store the constant data revision status. The specification reads:

“[H]ard disk drive 30 of vendor’s computer 12 is used to store . . . a revision data base” *Id.* col. 8, *ll.* 48-50.

“Each time the . . . constant data stored in vendor’s computer 12 is revised, a log of all changes that apply to a specific revision is kept. . . . When changes are made on vendor’s computer 12 to . . . the constant data . . . , the file names effected by the changes are kept in a revision data base and referenced to the next incremental update.” *Id.* col. 18, *ll.* 51-59.

These disclosures reveal that a data base, specifically “a revision data base” is used to store changes made to the constant data on the vendor’s computer. It is logical to conclude from these references that the “revision status” is the information contained in this “revision data base.” The specification teaches that the revision data base is stored on the hard disk drive of vendor’s computer. *Id.* col. 8, *ll.* 48-50. Moreover, the Court has construed the term “maintaining” to mean “keeping the most current information available for.” *Hill I*, 65 F. Supp. 2d, at 938. The revision data base disclosed in the specification is clearly meant to “keep the most current information available for” the revision status of the constant data. Therefore, the Court concludes that a data base on the hard drive is the structure on the vendor’s computer that stores the revision status.

For the foregoing reasons, the Court concludes that the corresponding structure for the function of the first element of Claim 38 that reads, “means for storing and maintaining a main revision status in the memory of the main computer, the main revision status indicating the revision level of the constant data stored in the main computer,” is “a data base on the hard drive of the vendor’s computer.”

The second means-plus-function element of Claim 38 states: “means for storing a remote revision status in the memory of the remote computer, the remote revision status indicating the

revision level of the constant data stored in the remote computer.” ‘490 Patent, col. 26, *l.* 66, to *id.* col. 27, *l.* 2. The parties agree that this element has the function: “storing a remote revision status in the memory of the remote computer.” Hill proffers the following corresponding structure: “The remote revision status is stored in customer’s computer 18 to provide an indication of the revision level of constant data stored in the remote computer. See Col. 4, lines 5-8 and Fig. 1C.” Pl.’s Claim Constr. Chart, at 8. CompuServe proposes to change the “See” in Hill’s construction to “as described in.” Defs.’ Claim Constr. Chart, at 17.

The Court finds that the function “storing a remote revision status in the memory of the remote computer” has a corresponding structure: “an identification file on the hard disk of customer’s computer.” The specification teaches: “[C]onstant data and identification and revision data are stored on hard disk drive 36 of customer’s computer 18.” ‘490 Patent, col. 8, *ll.* 65-67. The specification also teaches:

“[T]he identification data sent by customer’s computer 18 must contain both a serial number and a revision level that matches the validation data file stored in the validation data file on vendor’s computer 12.” *Id.* col. 13, *ll.* 47-60.

“Customer’s computer 18 changes to the transmit mode and transmits identification information including . . . the revision status of constant data stored on customer’s computer.” *Id.* col. 17, *ll.* 26-30.

Therefore, the revision status of the data on the customer’s computer must be stored in the identification file stored on the hard disk of the customer’s computer because that file must contain the “revision status of the constant data” stored on the customer’s computer.

For the foregoing reasons, the Court concludes that the function of the “means for storing a remote revision status in the memory of the remote computer” element has a corresponding structure: “an identification file on the hard disk of customer’s computer.”

H. CLAIM 39

The last disputed system claim of the '490 patent is Claim 39. Claim 39 reads: "The system of claim 38, wherein the means for comparing constant data in the remote memory with constant data in the main memory compares the remote revision status with the main revision status maintained in the main computer." *Id.* col. 27, ll. 3-7. Claim 39 depends upon Claim 38, and is written in means-plus-function format.

The parties agree that the function of Claim 39 is: "compares the remote revision status with the main revision status maintained in the main computer." Although the Court would change the word "compare" in the parties' agreed function to "comparing," this is a difference without significance. Hill proffers the following structure for the agreed function:

Vendor's computer 12 checks the constant data revision status transmitted from customer's computer 18 to vendor's computer 12 at block 336. The constant data revision status received from customer's computer 18 is compared with the current revision status of the constant data on vendor's computer 12. For instance, the revision status could be the revision level of the constant data. See Col. 18, lines 27-33.

Pl.'s Claim Constr. Chart, at 8. CompuServe proposes to change the "See" in Hill's proffered construction to "as described in." Defs.' Claim Constr. Chart, at 18.

The Court finds that the corresponding structure for the function "compar[ing] the remote revision status with the main revision status maintained in the main computer" is: "vendor's computer, as shown at block 336 of Figure 10A, configured to operate under the control of software programmed to perform the recited function." Like Claim 39 itself suggests, the specification teaches that the means for comparing the constant data in the remote memory with that in the main memory also compares the remote revision status with the main revision status maintained in the main

computer. The specification discloses:

“Vendor’s computer 12 also checks the constant data revision status transmitted from customer’s computer 18 to vendor’s computer 12 at block 336. The constant data revision status received from customer’s computer 18 is compared with the current revision status of the constant data on vendor’s computer 12. For instance, the revisions status could be the revision level of constant data. If the revision status of the constant data is not current, vendor’s computer 12 compiles updated constant data files at block 338 [of Figure 10A], adds the updated constant data files to the update file block 339 [sic], and transmits the update file to customer’s computer 18 at block 340 [of Figure 10A].” ‘490 Patent, col. 18, ll. 29-40.

“[T]he step of comparing the remote constant data revision status with the main constant data revisi[on] status in block 336 [of Figure 10A] is a [sic] accomplished as follows. Each time the main . . . constant data stored in vendor’s computer 12 is revised, a log of all changes that apply to a specific revision is kept. . . . When changes are made on vendor’s computer 12 to either the constant data or software, the file names effected by the changes are kept in a revision data base and referenced to the next incremental update.” *Id.* col. 18, ll. 47-59.


These passages make clear that the vendor’s computer, under the control of appropriate software, compares the constant data revision status on the remote computer with that on the main computer. Another part of the specification confirms that software is used to control the main or vendor’s computer in making the comparison; it states: “software on vendor’s computer 12 includes . . . revision status and update software.” *Id.* col. 8, ll. 43-47. There is no specific reference to “constant data revision status” in this passage, however, in nearly all references to revision status in the ‘490 patent specification where both software revision status and constant data revision status are each compared, they are compared in sequence with comparison of the software revision status occurring first. *See id.* col. 17, ll. 46-63 & *id.* col. 18, ll. 29-35. And, in each case, a comparison of the corresponding revision status is made to update the information. Therefore, it is logical to conclude that software configured to perform the comparison of the constant data revision status controls the vendor’s computer.

For the foregoing reasons, the Court concludes that the corresponding structure for the function of the "means for . . . compar[ing] the remote revision status with the main revision status maintained in the main computer" element is: "vendor's computer, as shown at block 336 of Figure 10A, configured to operate under the control of software programmed to perform the recited function."

IV. CONCLUSION

The Court has construed the system claims of the '490 patent as directed by the Federal Circuit. The claims and their constructions are clearly set out in each of the sections in this order.

IT IS SO ORDERED this 29 day of August, 2003.


LARRY J. MCKINNEY, CHIEF JUDGE
United States District Court
Southern District of Indiana

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